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THE MONOGRAPH SERIES
RUSSELL F. WHITEHEAD, EDITOR

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YEAST FROM THE WEST

EDITORIAL COMMENT BY KENNETH REID

Civilization, so we have been brought up to believe, has always inexorably taken its course westward. In this country, that has meant its progressive movement across the continent until it stopped against the barrier of the Pacific Ocean. Its advance guard went this far many years ago. Their successors who settled and are still in course of building up the country have by now taken firm root. In time, their descendants will no doubt become as conservative as the east is reputed to be today. Yet our observations on our recent trip to the architects' convention indicate that it is much too early to begin worrying about any flagging of the heritage of energy taken west and handed down by the pioneers to their children and their children's children. The west is alive and young and strong and exuberant. From it, in fact, is emanating a counter-wave of vitality which is rolling back to the east to have its effect on the older and more stolid parts of our national scene.

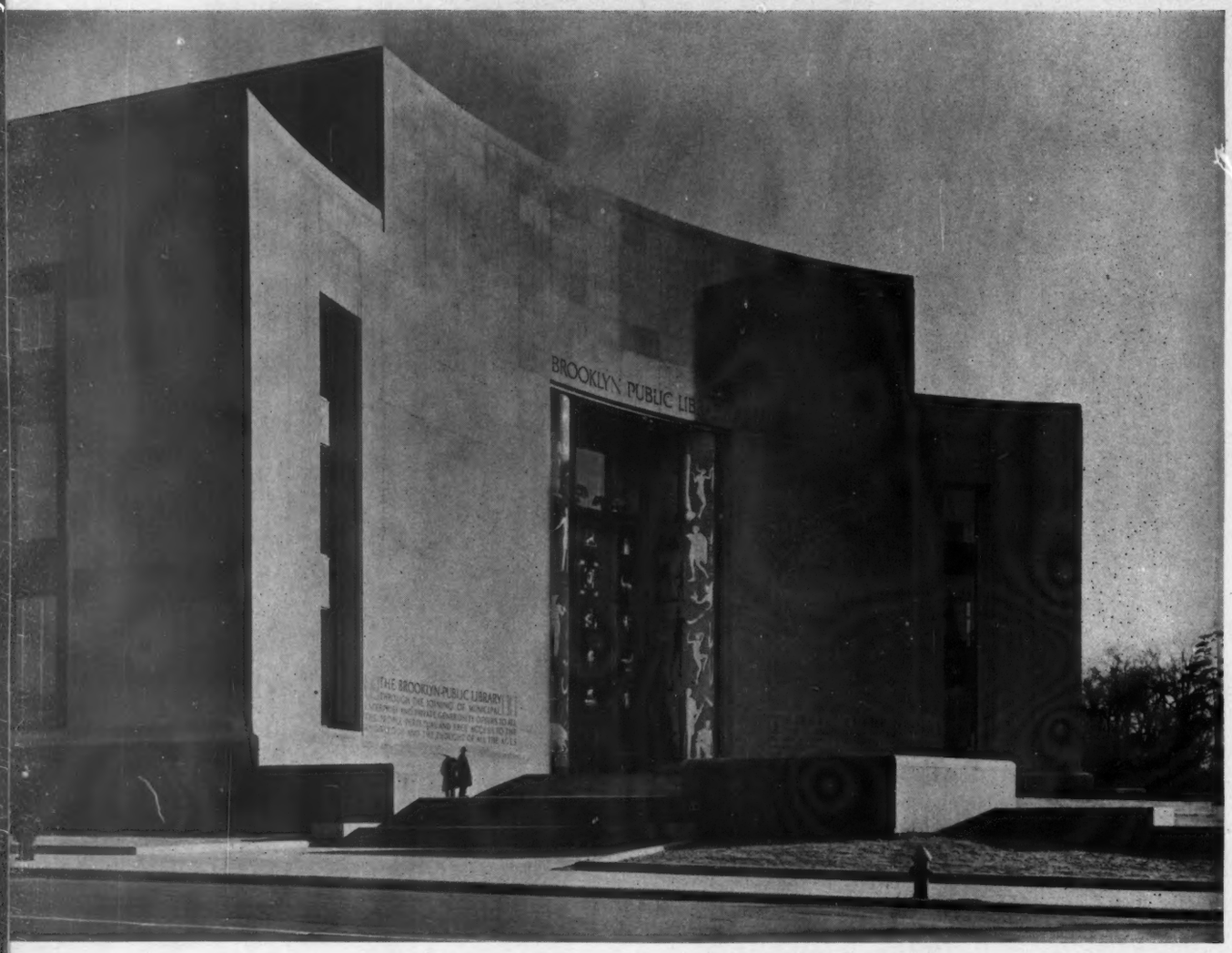
As architects, we are aware of this phenomenon in several ways. First, we sense the general country-wide interest in the development of sane modern design as it appears to flourish with unusual strength on the west coast. Amid all the aberrations that have manifested themselves as a part of the mushroom-like growth of the more raucous parts of the film industry there have come to be substantial islands of sound creative activity, ordered with good taste both by those who have adhered in part to appropriate precedent and by those who have experimented with new forms into which they have woven charm and human quality to produce a distinguished and indigenous architecture. In southern California, in and around San Francisco, Portland, Seattle, we found evidence of the presence of real architects, worthy to take their places with the best our country has produced. And it is a hopeful sign that architects everywhere are studying the work of these men, not in a spirit of imitation, but in a serious effort to find the essence which gives life and beauty to their creations. The germ is there and it can be used to leaven the mass of our national architecture if we apply it with intelligence and understanding.

Another evidence of the vigor of the architectural west and its leadership is seen in the way it has recognized the present need of the profession to do battle with some of the forces which are seeking to supplant the architect and which are in some areas already having an uncomfortable degree of success in doing so. The cultivation of public understanding and acceptance of the architect as a matter of self-interest has been for too long neglected. Individuals and groups here and there have recognized the menace and done something but their efforts have been scattered and relatively ineffective. In a world where propaganda on behalf of innumerable group interests has proved its power and has become the accepted method for survival and advance, the architectural profession has sat back and let others use the weapon against it. It is high time to begin an active and extended campaign to regain the ground that has been lost. And here again we find the west in the forefront of the movement that is now spreading through the profession, furnishing the spark, developing methods and techniques, and setting the example.

For it has been the radio programs put on by the Southern California men led by Walter Hagedohm and his associates that have impressed the rest of the country with what can be done with this modern medium of communication. It is the work of Ernest Born and his friends in San Francisco that is demonstrating the effectiveness of properly designed exhibits and putting into the hands of their fellow professionals an old weapon, newly sharpened. And it is the whole fighting spirit that comes to us out of the west that is on the way, we think, to enlivening architects everywhere to join the battle for their own survival.

THE DESIGN AND COMPLETION OF THE BROOKLYN CENTRAL LIBRARY, THE INGERSOLL MEMORIAL, FACING GRAND ARMY PLAZA AND THE MEMORIAL ARCH AT THE ENTRANCE TO PROSPECT PARK, BROOKLYN, NEW YORK, PRESENTED PECULIAR AND UNFORESEEN DIFFICULTIES TO DR. MILTON J. FERGUSON, THE LIBRARIAN, AND TO ALFRED MORTON GITHENS AND FRANCIS KEALLY, THE ASSOCIATED ARCHITECTS. MANY LIBRARY SYSTEMS THROUGHOUT THE COUNTRY HAVE CENTRAL BUILDINGS AND NO BRANCHES: BUT THE BOROUGH OF BROOKLYN HAD A WELL-ORGANIZED SYSTEM OF BRANCHES WITHOUT AN ADMINISTRATIVE CENTER. A MONUMENTAL BUILDING HAD BEEN STARTED IN 1907, CONFORMING TO AN IMPRESSIVE TYPE OF LIBRARY DESIGN THEN IN VOGUE, AND IT WAS THE PROBLEM OF THE ARCHITECTS TO PROVIDE A NEW BUILDING MEETING MODERN LIBRARY STANDARDS AND AT THE SAME TIME TO UTILIZE AS MUCH OF THE EXISTING STRUCTURE AS POSSIBLE. THEIR SUCCESSFUL SOLUTION, COMMENCED UNDER THE SUPERVISION OF BOROUGH PRESIDENT RAYMOND V. INGERSOLL AND CONSTRUCTED UNDER THE SUPERVISION OF THE BOARD OF PUBLIC WORKS, NEW YORK, IRVING A. HUIE, COMMISSIONER, IS ILLUSTRATED HERE IN PHOTOGRAPHS BY SAMUEL H. GOTTSCHO. THE DETAIL AT THE MAIN ENTRANCE (ABOVE) SHOWS A PORTION OF THE BRONZE GRILLE, MODELED BY THOMAS H. JONES, AND THE BASE OF ONE OF THE 50-FOOT COLUMNAR JAMBS, CARVED BY C. PAUL JENNEWEIN

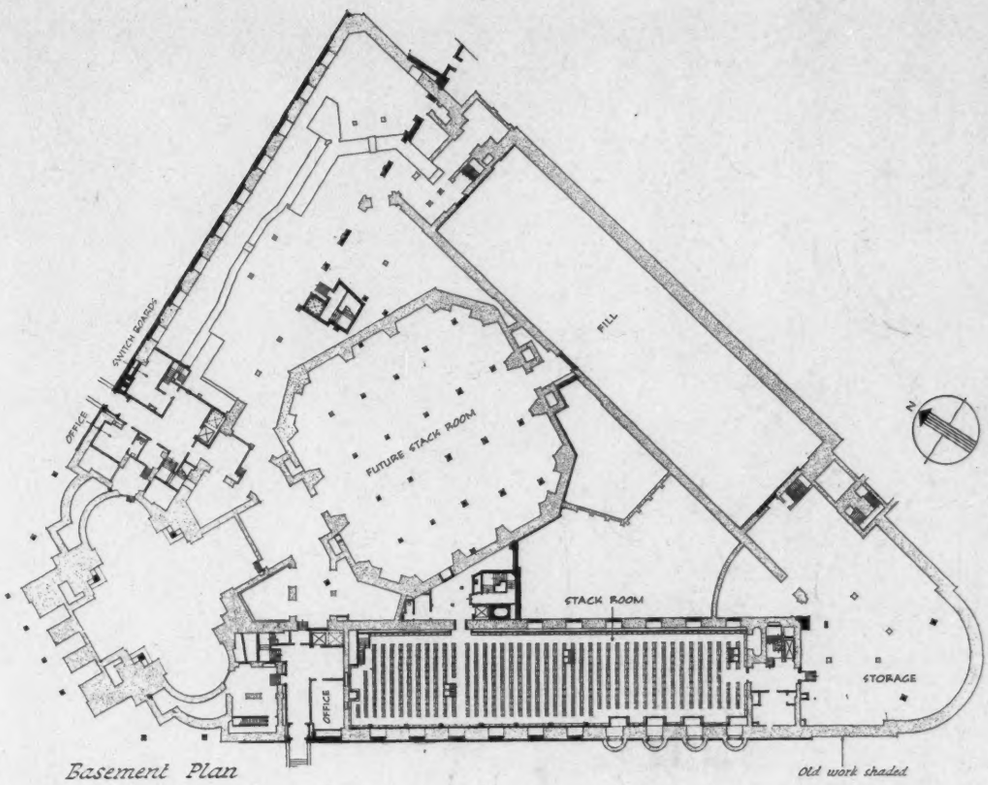
INGERSOLL MEMORIAL — BROOKLYN LIBRARY



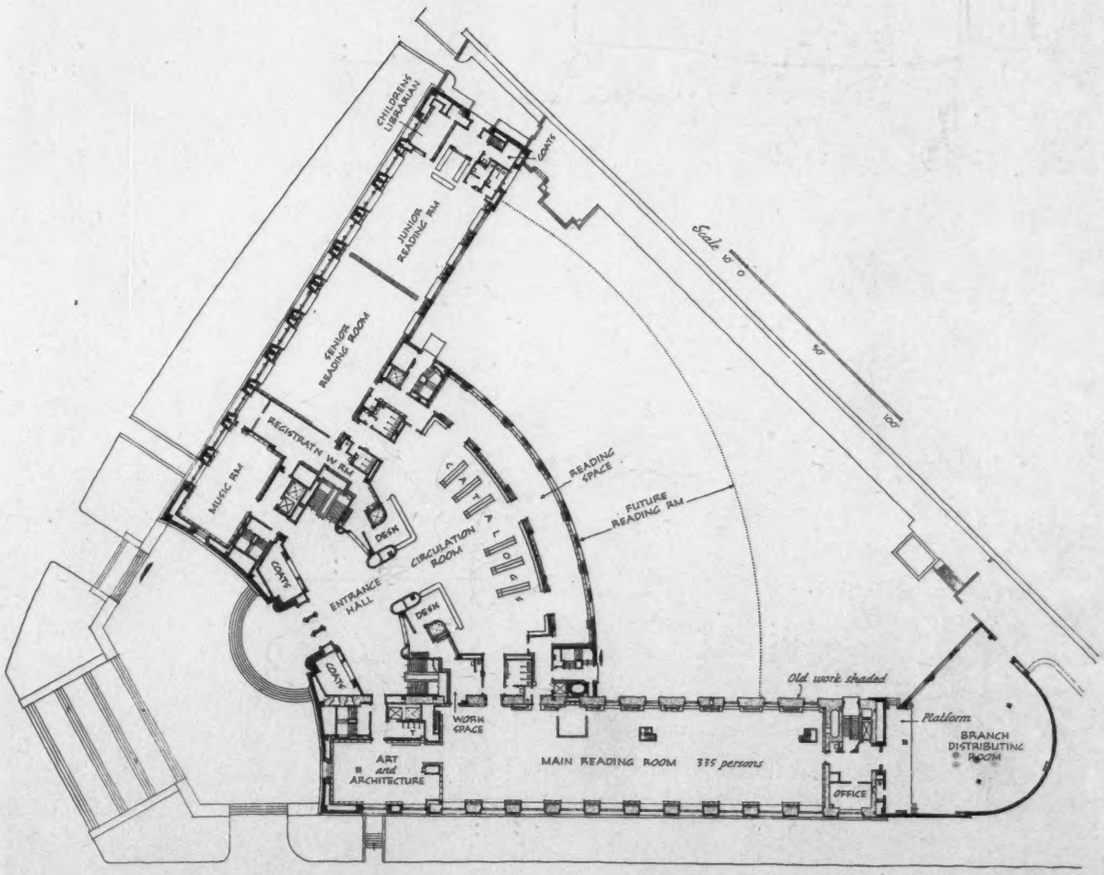
A MODERN CENTRAL LIBRARY

The theory of the Open Plan—which relegates stack facilities to the less accessible areas below the freely-disposed public rooms and work areas of a library—governed the redesign and completion of the Brooklyn Central Library. The unusually difficult job of designing a building that would meet modern library standards of convenience for the public and efficiency for the staff, at the same time incorporating the wing of a building conforming to an ideal that prevailed before the World War, forced the architects to adopt drastic measures.

For years the Borough of Brooklyn had been obliged to rent space in an office building for administration of its public library branches and much of the library reference material had been in storage, for lack of central reference facilities. Even the one wing that had been erected on the Central Library site was unfinished so did not serve to meet the need for a Central Library. It was intended as the first unit of a building that would have been primarily a civic monument, with the convenience of the staff and public of secondary consequence! Principal rooms were to be in the upper stories, reached by the fatiguing Grand Stairway and complicated corridors that were all considered "normal" in the era. The New York Public Library on Fifth Avenue with its 100 steps up from the sidewalk level to the principal reading room is an example of this type of library. Since it was built there has been a complete revolution in library planning to conform to the newer standards of

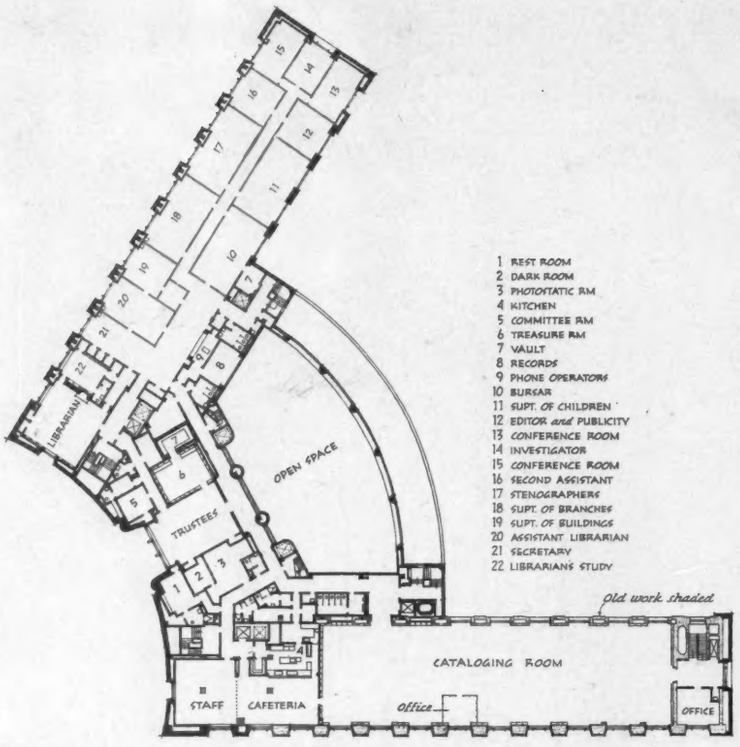


Basement Plan

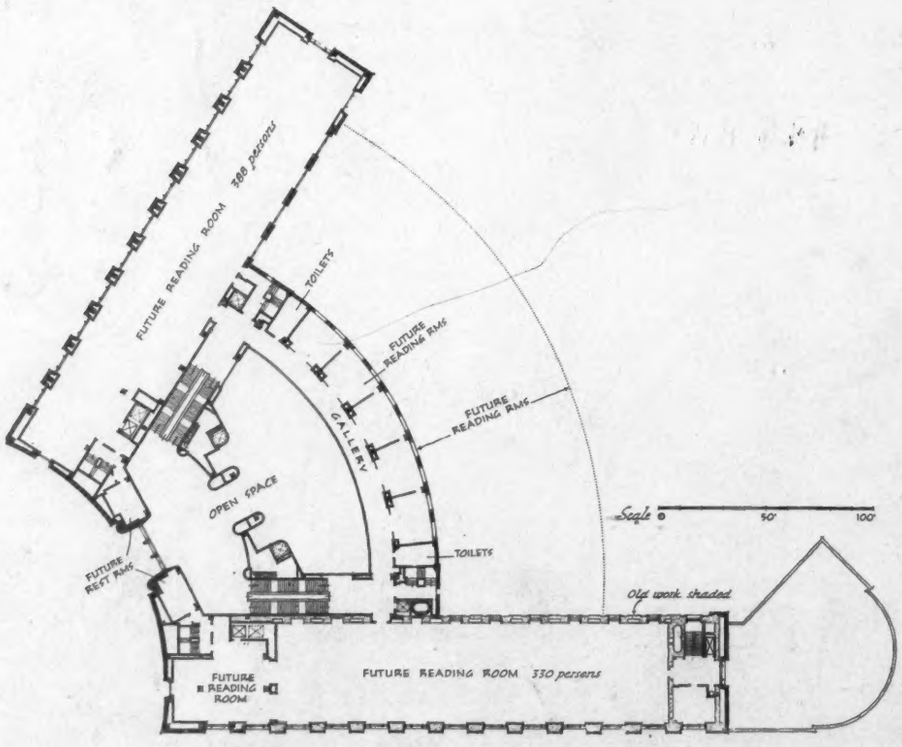


First Floor Plan

THE BROOKLYN CENTRAL LIBRARY WAS DESIGNED BY GITHENS & KEALLY, ARCHITECTS, NEW YORK, UNDER SUPERVISION OF THE BOARD OF PUBLIC WORKS, NEW YORK, IRVING A. HUIE, COMMISSIONER

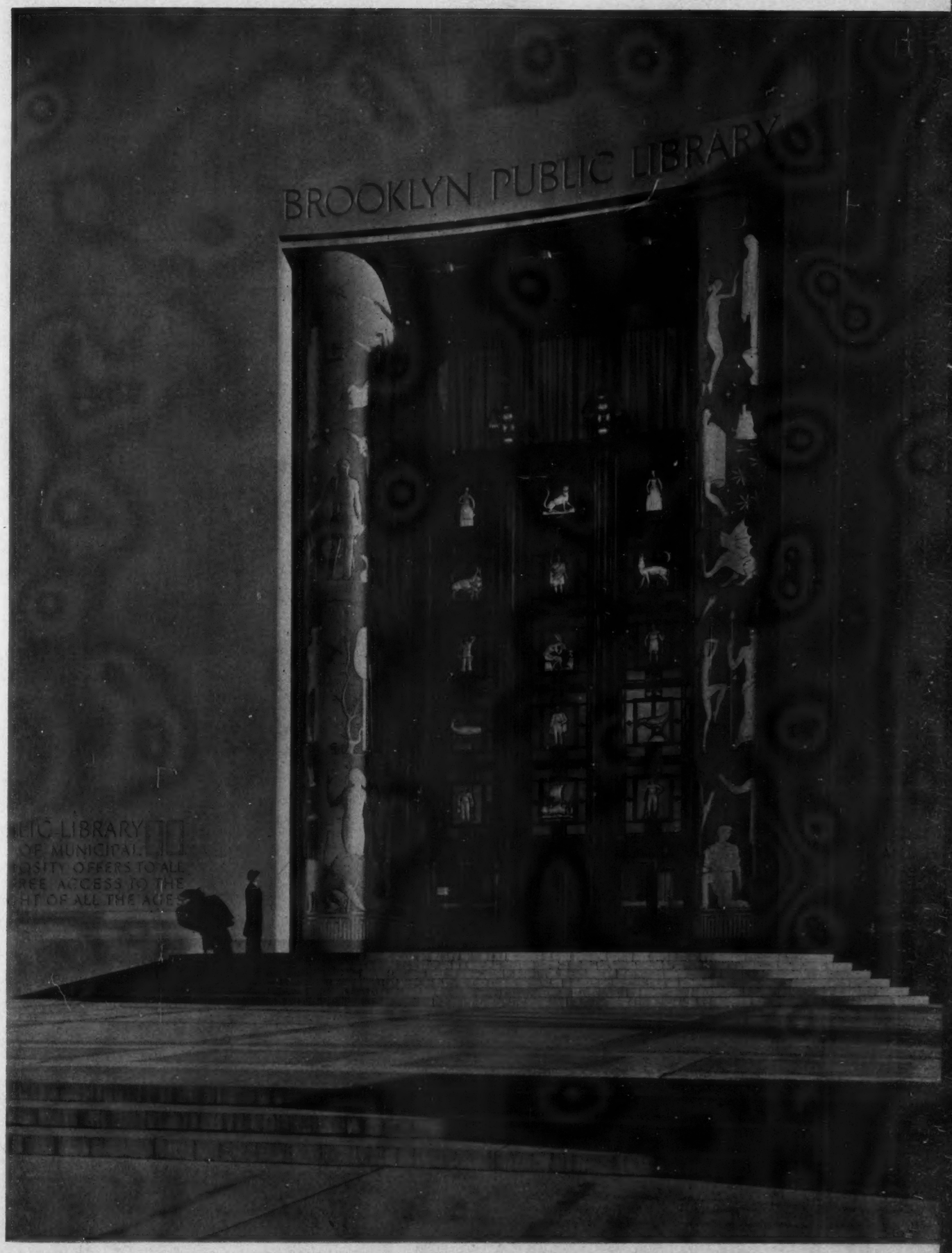


Third Floor Plan



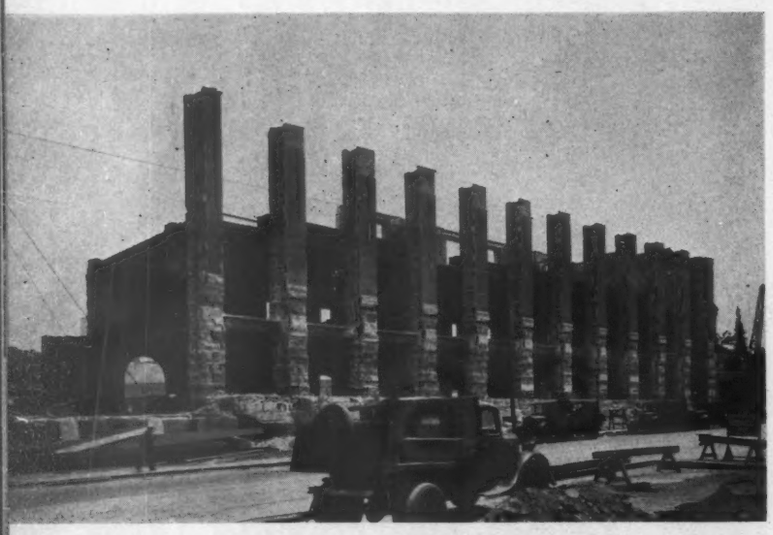
Second Floor Plan

INGERSOLL MEMORIAL — BROOKLYN, NEW YORK, CENTRAL LIBRARY



BY ALFRED MORTON GITHENS AND FRANCIS KEALLY, ARCHITECTS

THE ORIGINAL LIBRARY SCHEME WAS ABANDONED



THE EXISTING WING WAS STRIPPED AS SHOWN

NEW BUILDING GIVES MAXIMUM WINDOW SPACE

efficiency governing modern building design. The architects' solution of this complicated problem has been reported concisely by Mr. Githens in "The American Public Library Building: Its planning and design with special reference to its administration and service," written in collaboration with Joseph L. Wheeler and published this month by Charles Scribner's Sons. In course of a discussion of the Open Plan type of libraries Mr. Githens writes:

"Brooklyn Central Library presented a peculiar problem. All the foundations and one wing were built part at a time, from 1907 on, conforming to a type of library plan in vogue at the beginning of the century. For awhile the project lapsed. When work was resumed in 1937 the advance in library thought demanded an entirely different plan. This necessitated an ingenious use of the old piers for the foundations of a building little resembling the old design. The existing wing was partially incorporated, its upper story removed, the entire façade torn down except for the structural piers, the spaces between them filled with windows, and the piers covered with a new stone facing conforming to the rest of the new exterior design.

"The scale of the building is so vast it is difficult to envision it. The entrance doorway is fifty feet high but looks none too large for its surroundings. It fronts the huge oval Grand Army Plaza with the Memorial Arch and the entrance to Prospect Park. The ground rises toward the rear, there level with the first floor. This and existing floor construction necessitated the terrace and entrance steps. Behind is an old reservoir now converted to a playground, its plateau level with the library's third floor . . . .

"In triangular form with entrance at the apex and long reading rooms at the sides, it resembles Fort Worth; but the flow of people is Radial whereas at Fort Worth it is Concentric around the central stack. At Brooklyn the stack is to fill one basement space after another as the need grows, and finally to extend to a space provided for it over the present roof. As in Baltimore, Rochester, and Toledo there is a central hall

ARCHITECT RAYMOND F. ALMIRALL DESIGNED A MONUMENTAL BUILDING IN 1907 FOR GRAND ARMY PLAZA

with circulation desks and catalog around it and five entrances through a 'service circle' of the department staff desks and workrooms to the outside circle of reading rooms, those in the center-rear not yet constructed. The second floor has space for a similar series of reading rooms directly over those below, approached from two stair-halls and a connecting balcony. These upper rooms are not yet equipped for use. Corridors are avoided on both these floors.

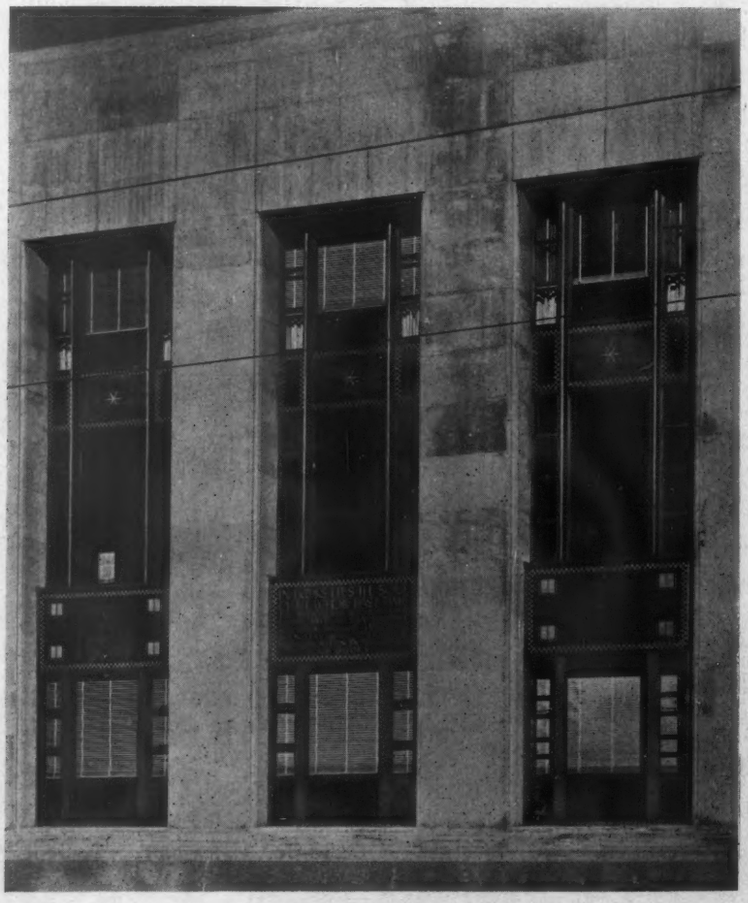
"Department location will change from time to time as more people use the building and more reading space is added. For the present only the side rooms on the first floor are used for readers, the right for adults and the left for young people who enter from the central hall and children who have their own entrance through a paved garden at the furthest end. A future exhibition room is used for the music collection, reached through the entrance hall. The space for the future rear 'service circle' is used for fiction and new books, an arrangement somewhat like Wilmington. In future the entire first floor may possibly be taken for adult use, comprising the departments that most need quick access to the catalog. The invariable difficulties attendant on a library on two floors are bound to occur, unless by that time the functional anatomy of a large library has changed.

"The central hall is lofty, extending through the third floor and lighted by a huge curved clerestory of structural glass over the rear reading rooms.

"The third floor (except for a treasure room) is entirely for administration, book preparation and the staff. Elevators in five locations connect it with the entrances and the floors below. The trustees' and treasure room are combined, in the center over the entrance doorway, with bookroom and vault adjoining. It therefore has the finest position and an outlook over the plaza to lower Brooklyn and Manhattan. At the corner, equal in outlook, are the librarian's office and the staff room. The three are connected by a passage overlooking the circulation hall through plate glass.

"Besides the main public entrance and children's entrance there are basement entrances in each wing counting as fire-exits, on the right for supplies to cafeteria, etc., on the left for staff entrance and for those who cannot negotiate steps. A fifth entrance is through the shipping department at the end of the right wing."

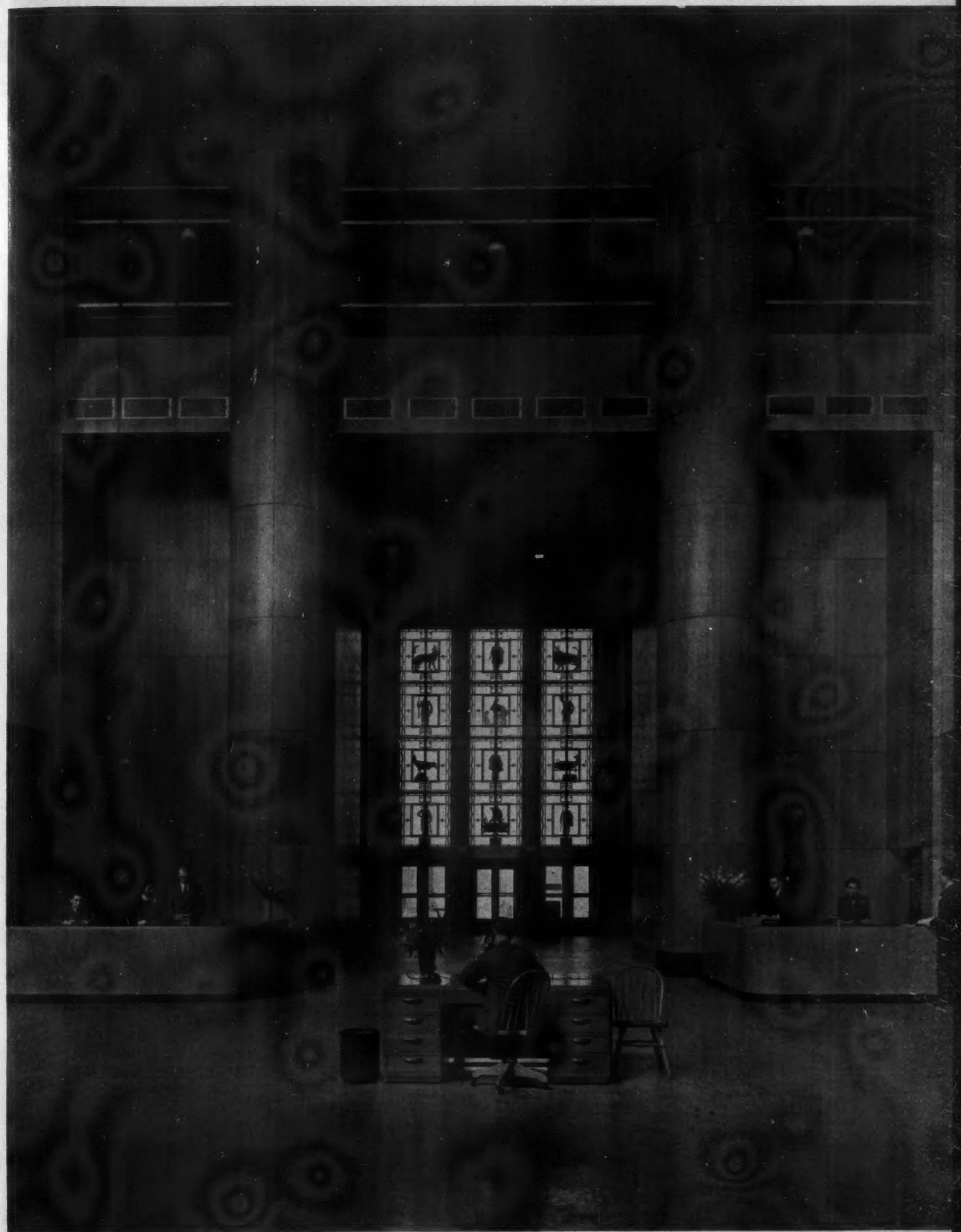
To the architects and to Dr. Milton J. Ferguson, Chief Librarian, the interior arrangement was the most important and vital phase of the problem. The plan permits further



extension of the facilities of the library, particularly the basement auditorium and additional stacks (see section on page 448). Mechanical installations include part hot water radiation and part conditioned air for the comfort of readers and the preservation of stored books; the lighting of reading rooms by lamps and reflectors concealed in the ceilings, with light rays directed by lenses set flush with the plaster; elevators (principally for staff use); other apparatus required by modern building standards; and framing for future escalators from the first to the second floor.

The construction and installation was most difficult and exacting because of the necessity of fitting in with the old work, the predetermined curves and extraordinary forms of the previous design. The ingenuity of the architects was "taxed to the full" in planning the new rooms to rest on old foundations.

As more portions of the building are completed, and the Central Library is used by an increasing number of citizens, the provisions of the revised plan will be fully realized. An extension at the rear, more than doubling the reading space on both the first and second floors, has been planned. There is space in the basement for stacks to store nearly a million volumes. The walls of the central building extend well above the present roof and in the space behind them another stack room for a million volumes can be built.



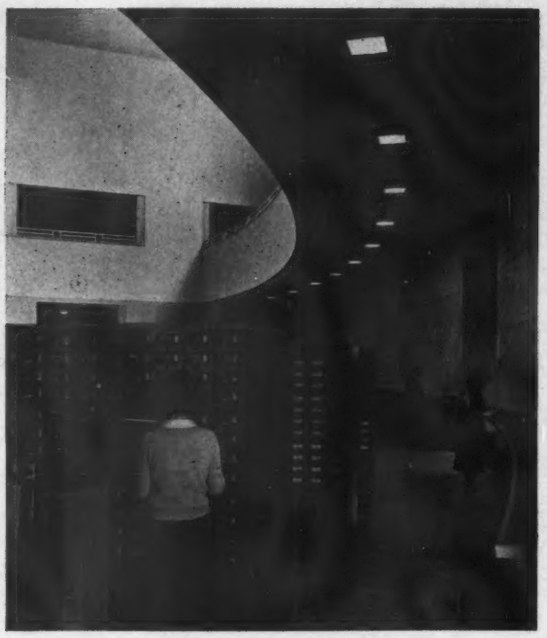
BROOKLYN CENTRAL LIBRARY — BY GITHENS & KEALLY, ARCHITECTS

EFFECT OF THE LOFTY ENTRANCE HALL AND ADJACENT CIRCULATION DEPARTMENT IS THROUGH CONTRAST

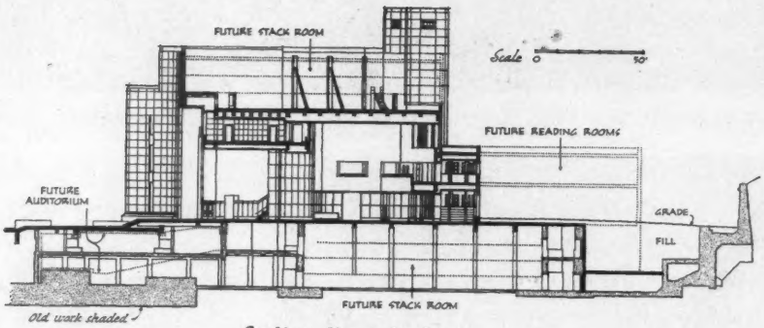
INGERSOLL MEMORIAL — BROOKLYN, NEW YORK, CENTRAL LIBRARY

OF FORMS, MATERIALS, AND DRAMATIC PROPORTIONS. ORNAMENT WAS ENTIRELY AVOIDED ON THE INTERIOR

BY ALFRED MORTON GITHENS AND FRANCIS KEALLY, ARCHITECTS



CATALOG CASES ARE ARRANGED IN THE CIRCULATION ROOM OPPOSITE THE MAIN ENTRANCE, FOR MAXIMUM ACCESSIBILITY AND CONVENIENCE OF THE PUBLIC. THE DOWN-LIGHTS UNDER THE GALLERY (SEE ALSO PAGE 447) SUPPLEMENT THE GENERAL ILLUMINATION AT THIS POINT. NOTE THE WALL COUNTER, AT THE PROPER HEIGHT FOR THOSE STANDING IN THE CATALOG SECTION



Section thru Center

A COMFORTABLE READING SPACE IMMEDIATELY BACK OF THE CIRCULATION ROOM AND CATALOG IS USED TEMPORARILY FOR THE POPULAR BOOKS, WHICH CAN BE SELECTED DIRECTLY FROM THE SHELVES OR FLOOR CASES. IT IS WELL LIGHTED BY TEN WIDE WINDOWS ON THE CURVED WALL, WHICH WILL BE REMOVED FOR FURTHER EXPANSION OF THIS AREA. (SEE SECTION ABOVE)

THE TRUSTEES' ROOM ON THE THIRD FLOOR IS RICH IN EFFECT ALTHOUGH THE ENTIRE TREATMENT AND FURNISHINGS ARE SEVERELY PLAIN. IT IS SIMILAR IN CHARACTER TO THE LIBRARIAN'S OFFICE SHOWN OVER-PAGE. ANOTHER VIEW OF THE READING SPACE JUST BACK OF THE CIRCULATION ROOM IS SHOWN BELOW. THE CONTRAST OF OAK WAINSCOT AND PLASTER WALLS AND CEILINGS, GLEAM OF CHROMIUM AND GLASS, AND THE SUBTLE DECORATIVE EFFECT OF THE BOOKS THEMSELVES WERE INGENIOUSLY EMPLOYED BY THE ARCHITECTS TO CREATE THE PLEASANT INTERIORS OF THIS LIBRARY

THE LIBRARIAN'S ROOM IN THE OFFICE WING ON THE SECOND FLOOR IS COMFORTABLE AND INVITING

INGERSOLL MEMORIAL — BROOKLYN, NEW YORK, CENTRAL LIBRARY

BY ALFRED MORTON GITHENS AND FRANCIS KEALLY, ARCHITECTS

THE CHILDREN'S ROOM ON THE FIRST FLOOR IS SPACIOUS, LIGHT, AND WELL-VENTILATED. THE VIEW ABOVE IS IN THE JUNIOR READING ROOM LOOKING TOWARD THE OFFICE OF THE CHILDREN'S LIBRARIAN (LEFT), THE BOOK DESK (CENTER) AND THE TOILET ROOMS (RIGHT). THE SENIOR READING ROOM IS SHOWN IN THE VIEW BELOW—SEPARATED FROM THE JUNIOR READING ROOM ONLY BY A ROW OF CASES

BROOKLYN CENTRAL LIBRARY — BY GITHENS & KEALLY, ARCHITECTS

ANALYSIS FOR THE NEW YORK PUBLIC LIBRARY

BY IDES VAN DER GRACHT & WALTER H. KILHAM, JR.

One of the most familiar landmarks on Fifth Avenue is the Central Building of the New York Public Library. It contains not only the principal reference collections but also the heart of the Circulation System.

With increased use by the public, the demands made on the facilities of this building became so heavy that the Trustees decided to investigate the possibilities of devoting the Central Building to reference use only, and housing the Central Circulation Branch and Circulation administrative offices elsewhere.

The Architects were asked to make a study to determine the most economical and the most efficient way of providing space for these departments. Two possibilities were considered. First, the purchase and adaption of an existing building close by. Second, the construction on a site owned by the Library some blocks away of a new building designed especially for the requirements of the Circulation Department. A major consideration was that of future expansion to take care of the growth of the book collections and of the constantly increasing use of the Central Circulation Branch by the public.

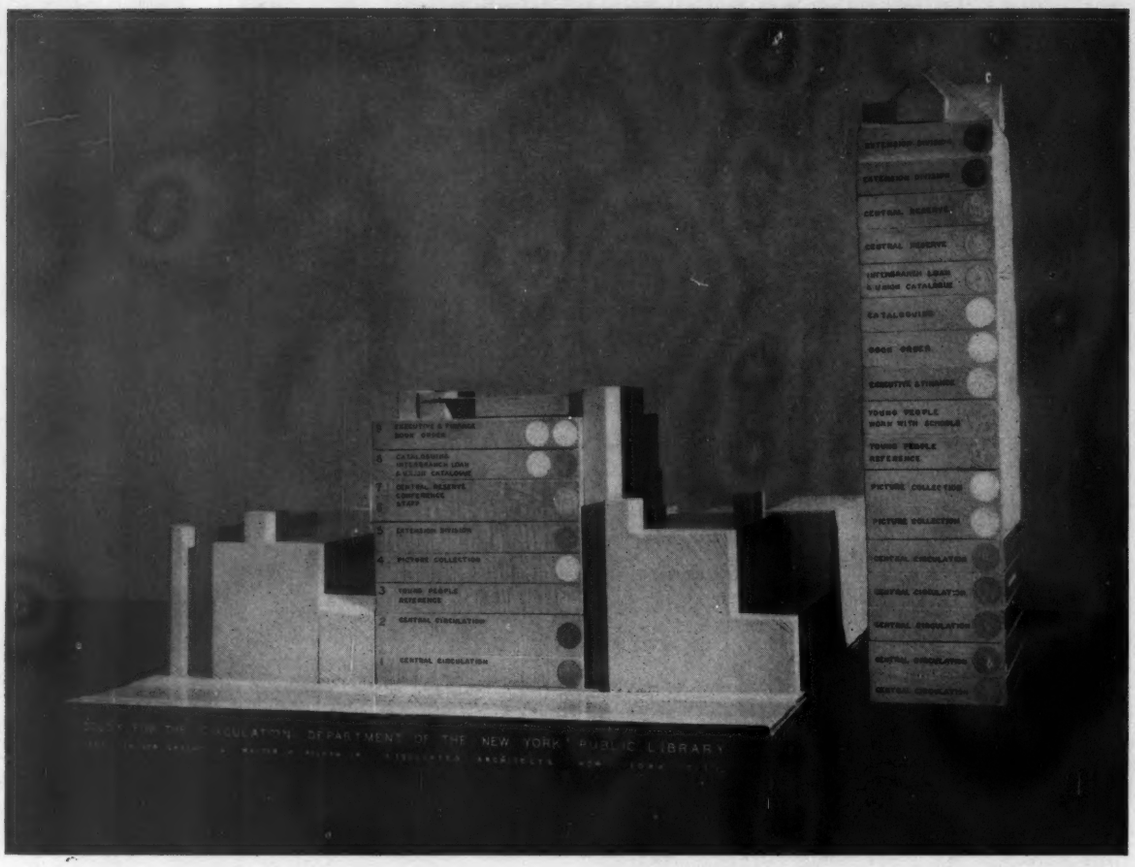
* * * *

The Circulation Department of the New York Public Library comprises a complex group of activities. The *Central Circulation Branch* is the largest and busiest branch in the New York Library system. It must be at or near street level with provision for the return of books, the obtaining of reserve books, the registration of new borrowers, and with adequate adjoining work spaces.

The *Executive Offices* house the administrative and financial offices for the entire Circulation Department and all its branches. These offices should adjoin the *Book Order Office* which orders all new books for all the branches; receives, unwraps, inspects and checks them. They are then sent to the *Cataloging Department* which classifies and catalogs all the books in the circulation system, and handles all books which are to be discarded. A reservoir of books which are less often called for and which are available for circulation to any branch that requests them is housed in the *Central Reserve* stack. This is administered by the *Interbranch Loan Office* where transfers of books are cleared at borrowers' requests from one branch to another. Both the Interbranch Loan Office and the Cataloging Department constantly use, and must therefore be adjacent to, the *Union Catalog* which lists the books in all the branches.

The *Extension Division* serves eleven subbranches throughout three boroughs of the city, plus many deposit stations, book wagons, camp collections, hospitals, jails, etc. Its work involves a great amount of shipping and receiving of books from its special collection, so that convenience to the freight elevator and truck entrance is essential. The construction of the *Stacks* would be simplified and their use made more flexible by housing the large collections of the Central Reserve and the Extension Division together, adjacent to their respective spaces.

The *Picture Collection* is one of the most heavily consulted departments in the Public Library. It has increased over 400% in both picture stock and circulation during the past



MODELS AT THE SAME SCALE OF TWO BUILDINGS UNDER CONSIDERATION SHOW AT A GLANCE THE RELATIONS OF THE DEPARTMENTS IN EACH

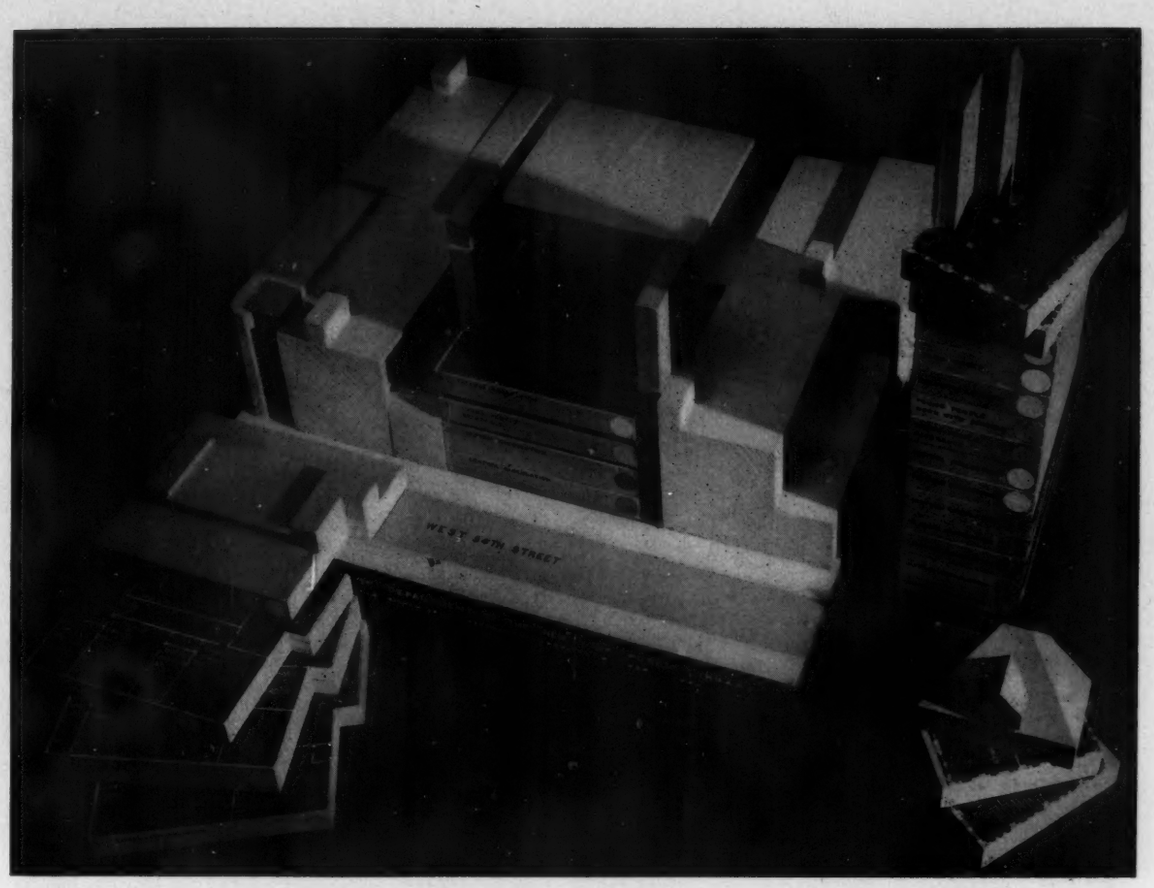
ten years and its growth is expected to continue at a minimum rate of over 6% per year. Special methods of shelving and filing pictures which combine compactness with accessibility had to be developed and space provided for well-lighted drawing tables where pictures can be copied or traced.

Certain other activities at present scattered about the city were to be accommodated in the new quarters of the Circulation Department. The *Young People's Reference Department* contains a general collection for young people who are now barred from using the Central Building for lack of room; there is a circulating recreational reading collection which provides material not ordinarily available in school libraries, and a teachers' and social workers' collection of books about juvenile pedagogics.

Accommodation was also desired, if possible, for the *Music Library*, now housed in another building and containing books about music and musicians, musical scores and phonograph recordings. The *Library for the Blind*, while part of the Circulation Department, is largely a mail-order activity and is housed elsewhere.

The analysis of the highly technical space requirements and interrelating functions of these various divisions, together with reasonable estimates of their growth, added up to a formidable mass of material. The problem presented was how to simplify this, not only so that every possible combination could be developed within the Architects' own office, but also so that these different possible solutions could be discussed clearly and yet in detail with the staff of the Library and finally presented to the Trustees for their decision.

In our office we have always made models of every project we study, from the smallest to the most complex. In this instance a schematic model seemed by far the simplest method of bringing the whole intricate picture into focus. Block models were made of each floor of the building whose purchase and alteration were contemplated. For comparative purposes, we established the maximum envelope for a new building to house the same



THE RELATIVE EFFICIENCY OF THE DEPARTMENTAL LAYOUTS CAN BE READILY GRASPED BY COMPARING THE FLOOR BLOCKS IN EACH SCHEME

number of activities, and this was similarly divided into block floors. Vertical members represent the elevator and utilities shafts and stairways. Each floor was made up of a block of the proper height and area, showing the setbacks and net space available. A plan of the layout of each floor was pasted on top of each block. The name of the division occupying each floor, together with an identifying colored circle, appeared on the face of each floor block. In this way it became immediately evident that whereas Central Circulation, for example, required five levels in the remodeled building it only required two in the new. The blocks showed at a glance the relations of the departments within the buildings and by taking out the blocks these were readily demonstrable.

* * * *

These studies quickly proved that the remodeled building was not particularly suited to accommodate the large crowds of the Central Branch and the many specialized and closely inter-related activities of the Circulation Department. The total available floor area was inadequate. More serious was the small area of the many individual floors. Central Circulation activities required five floors and the large crowds visiting it would have to use the elevators which were not designed for that type of traffic. Numerous departments, such as the Picture Collection and Young People's Reference, which should occupy single floors for efficient use and supervision had to be spread over several floors where control of the public necessitated the construction of a number of inter-communicating stairs within the departments, separate from the existing fire stairs. This reduced the already inadequate floor space and added to the difficulties of the staff. The Catalog and Interbranch Loan divisions, which both constantly use the Union Catalog, could not be on the same floor, because none was large enough. The freight elevator was so located that it was difficult to place work spaces in the proper relation to their departments, making the installation of a book lift necessary. Shipping and trucking facilities were inadequate.

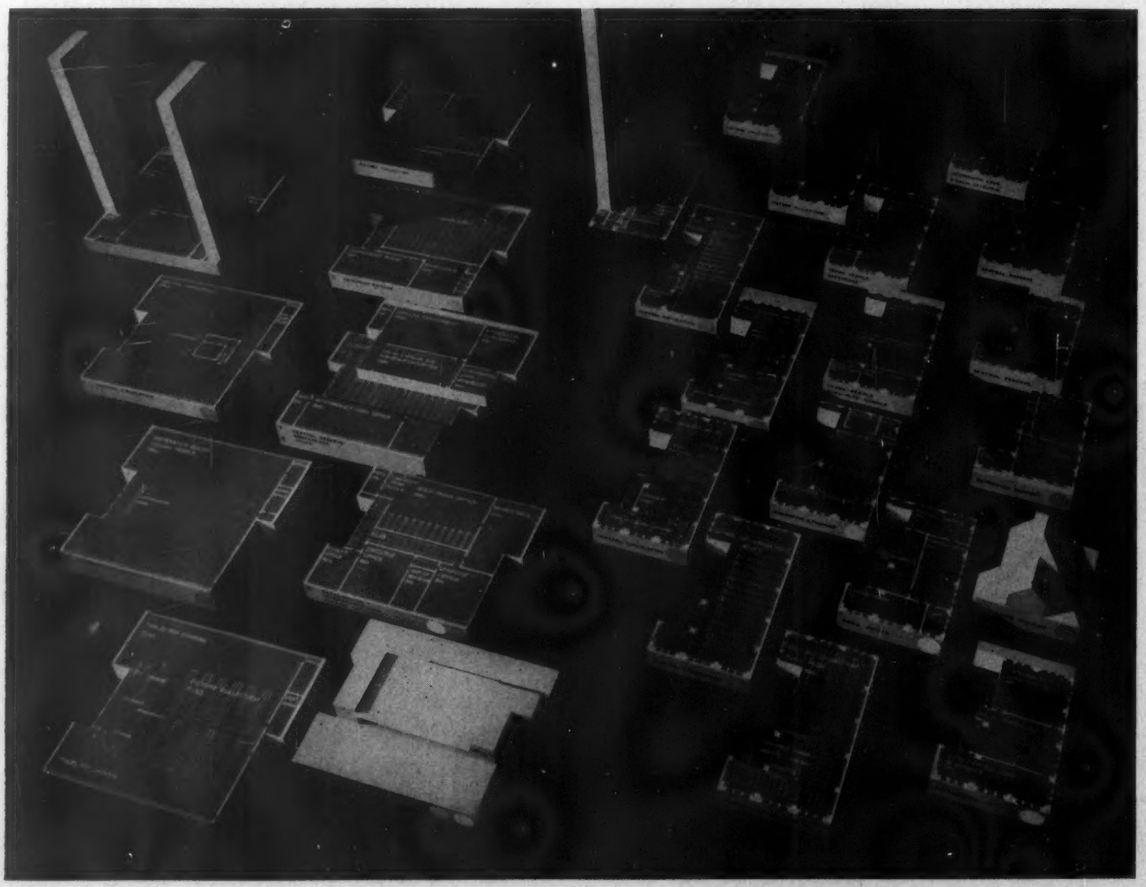
There was no provision for expansion, inasmuch as the building as it stood could not even accommodate the Music Library or the Library for the Blind.

An alternate building on a one-hundred-foot site owned by the Library would provide the large floor areas essential to efficient functioning. In this building Central Circulation can occupy both the first and second floors, connected by a broad open staircase, the public spaces of Young People's Reference and the Picture Collection occupying a full floor each. Cataloging, Interbranch Loan and the Union Catalog used by both can all be accommodated on a single floor. The Central Reserve stack is in two levels of stack construction, saving head room, while providing adequate ceiling height in the adjacent Conference Room. For purposes of comparison, the new building was designed to accommodate the same activities that could be housed in the remodeled taller building.

By adding more floors, the Music Library and the Library for the Blind could also be accommodated. This would provide a safety factor for future expansion, especially of the Picture Collection, as the Music Library might some day find permanent quarters in a museum housing all the musical collections of the city, and the Library for the Blind, which is chiefly a mail order activity, might also be removed at some later date to other quarters and thus provide expansion for those departments which would necessarily have to remain always within the Central Branch building.

* * * *

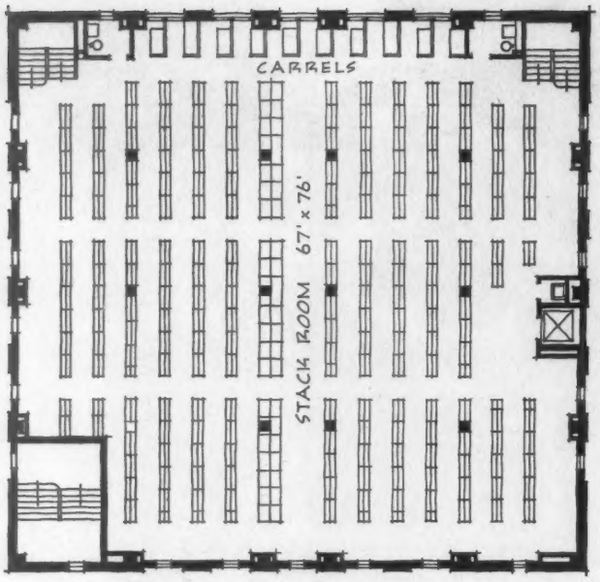
The efficacy of this model method of presentation compared to sheaves of blueprints and statistics was demonstrated at a luncheon meeting of Trustees. The relative volume of the buildings, the disposition of the departments and the efficiency of the larger as compared to the smaller floor areas could be grasped quickly. This, together with the fact that a new building could be built and furnished for approximately the same amount as the existing one could be acquired and altered, allowed the Trustees to come to a prompt decision. I. V. D. G.



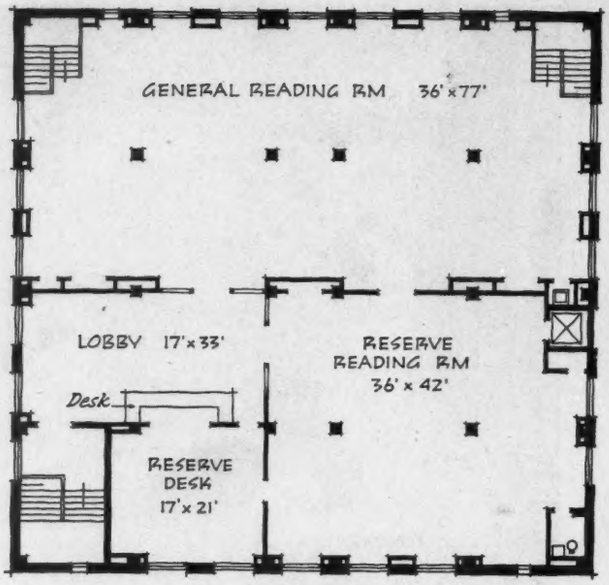
BLUEPRINTS OF THE FLOOR LAYOUTS ARE PASTED ON FLOOR BLOCKS. PHOTOS BY RICHARD GARRISON

THE EXTERIOR OF THE BUILDING REFLECTS THE DIRECT PLAN. PHOTOS ARE BY ADOLPH STUDLY

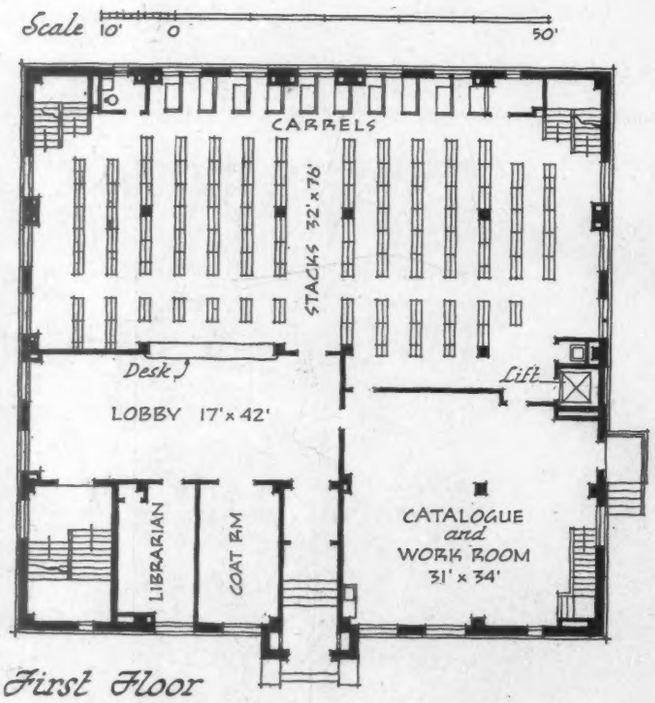
SKIDMORE COLLEGE LIBRARY — BY LOUIS E. JALLADE, ARCHITECT



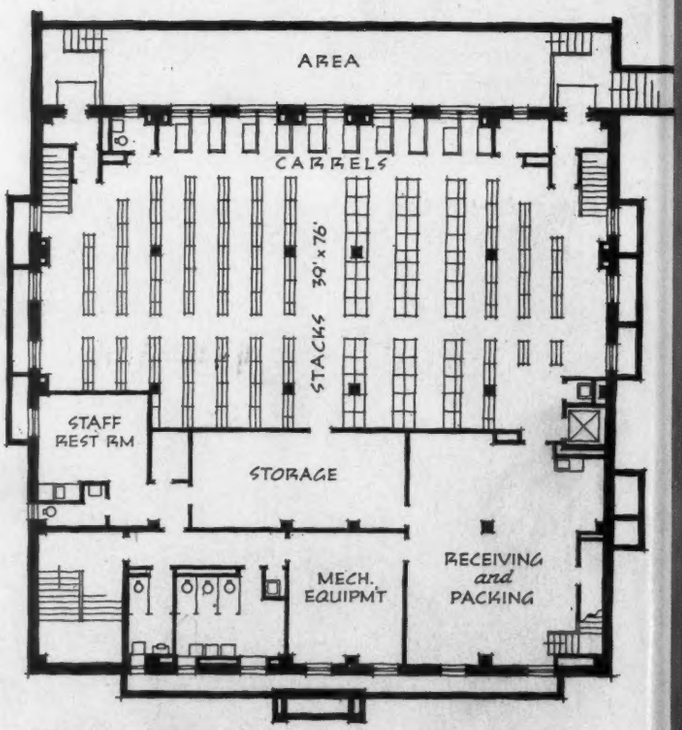
Mezzanine



Second Floor



First Floor



Basement

A SOLUTION OF THE INSTITUTIONAL LIBRARY BUILDING IN WHICH THE ENTIRE UPPER FLOOR, WITH LOFTY CEILING HEIGHT AND AMPLE NATURAL AND ARTIFICIAL LIGHT, IS GIVEN TO READING ROOMS, IS FOUND IN THE SKIDMORE COLLEGE LIBRARY AT SARATOGA SPRINGS, NEW YORK. THE STACKS ARE COMPACTLY ARRANGED IN THREE LEVELS AND OCCUPY THE EQUIVALENT FLOOR AREA OF TWO FULL FLOORS. STAFF FACILITIES ARE LOCATED IN THE BASEMENT AND AT THE GROUND LEVEL. OTHER REQUIREMENTS OF THE LIBRARY BUILDING ARE SOLVED IN THE SIMPLEST WAY POSSIBLE. IT SHOULD BE NOTED THAT THE BUILDING IS SEVERELY PLAIN YET IS INVITING AND SUGGESTS A PLEASANT PLACE FOR RESEARCH, STUDY, OR CASUAL COLLEGE READING, WITH READY ACCESS TO THE STACKS AT THE ENTRANCE LEVEL

SKIDMORE COLLEGE LIBRARY, SARATOGA SPRINGS, NEW YORK

GENERAL READING ROOM — SECOND FLOOR

DESIGNED BY LOUIS E. JALLADE, ARCHITECT OF NEW YORK

THE LOBBIES ON BOTH FLOORS OF THE LIBRARY ARE INVITING, THOUGH HANDLED QUITE SIMPLY

SKIDMORE COLLEGE LIBRARY — BY LOUIS E. JALLADE, ARCHITECT

THE VIEWPOINT OF LIBRARIANS

BY PROFESSOR ERNEST J. REECE*

Responsibility for results. Librarians would be untrue to their professional aims if they failed to be concerned about the æsthetic aspects of the buildings in which their collections are housed. At the same time their knowledge of the needs to be met makes them stress practical requirements when a new structure is contemplated. Their interest naturally focuses on those features which are vital to effective use and service.

Computing areas. The first thought is of space—for the stock of books and other records; for readers, enquirers, students and research workers; for the various operations entailed in administering a library; and for the convenience and necessities of a staff. This space needs not only to be correct in amount, but capable of re-arrangement and expansion. To assure it there must be study of the situation and activities of a library, and a schedule or program setting forth the specifications resulting from this. It is quite feasible, in the light of a building's purposes, to particularize the rooms and departments called for, to reckon the capacities suitable for each, and to translate these capacities into appropriate floor areas. In fact such an approach is indispensable if error and guesswork are to be avoided and if functional requirements are not to be subordinated. A classic example of its neglect is the failure to estimate the number of technicians to be employed in acquiring books and preparing them for the shelves, and to provide floor-space accordingly. Another is the overbuilding of reading rooms.

As indicated above, supplying rooms which are suitable at the moment is not the whole story, for spaces that are right today may be anything but that tomorrow. Librarians therefore ask that no disposition of departments be final; that permanent walls be as few as possible; and that fenestration, piping, wiring and comparable elements be such as to permit free interchange of parts and general readaptation. Moreover, they desire sites that allow expansion, façades that permit alteration, rooms that can be enlarged advantageously, plans that can be supplemented without dislocation of elements, and perhaps foundations for added stories.

Disposition of areas. Almost as important as correctness in amount is efficient distribution of spaces. On this the interests of the clientele merit first consideration. Most readers and users visit libraries with a purpose, and wish to go about their business without obstacles and delay. They desire layouts which they can understand readily. They expect central or prominent placing of the rooms they attend often, and the minimizing of barriers, ascents and descents for any which must be remote. They are entitled to come and go without crowding, and on the other hand without feeling lost in great chasms or oppressed by vast voids.

Conditions of administration and work for the staff similarly claim attention. To some extent the users of libraries must be guided, aided and even supervised, and it is essential that these things be done without undue multiplication of service points, and without great enlargement of staffs and of salary budgets. This indicates a concentration of those facilities which involve numerous or constant contacts between clients and the professional personnel, so far as is practi-

* *Professor of Library Service, Columbia University, New York*

cable without crowding the public or causing congestion at desks, catalogs, tables, or shelves. As concerns economy of time and effort for the staff, obviously it is desirable to group related operations, to provide short and direct traffic avenues, and to plan a straight-line flow of work in and among processing departments. Moreover, both users and attendants should receive those positions in a building which are favorable for light and air. Normally therefore the periphery would be assigned to reading rooms, studies, technical quarters and rest rooms, rather than to book-stacks.

Avoiding involvements. Librarians feel too that a library building, if it is to be most useful, must be free from extraneous and distracting features. For one thing, this entails divorce from whatever associations might hamper library work or usurp library resources. Where quarters are shared with other agencies the normal space allocations are apt to be deranged, noise and confusion tend to be aggravated, control and supervision are made difficult, and the conditions necessary for study and reading often are rendered impossible. Often, too, it means that areas and funds which would be scant for the libraries alone have to be divided, and directed in part to other purposes.

Another incompatible factor is the ostentation which tends to mark public buildings and which has been the curse of many libraries. Æsthetic development there should be, of course, both within and without. To achieve this, however, it hardly can be necessary to incorporate over-sized lobbies and memorial halls, nor to plan reading rooms so large as to consume space needed elsewhere, nor to adopt architectural forms which preclude adequate lighting from without. Certain interior treatments likewise are to be avoided, e.g., murals which are gaudy or attract sightseers, and mouldings, friezes, panels, and beams of the kinds which collect dust or impede the reflection of light. Indefensible also is the apportioning to marble façades of money which is needed for interior areas or book-stacks, and the expenditure for bronze doors of funds which might install and maintain exhibit cases.

Assurance of light. One essential in library planning which should be fully obvious seems often to have received the last and least consideration, namely the supply of light. Adequacy here means an amount and kind of light that will enable a library to promote the fullest utilization of books. It assumes a level of illumination no lower than would be acceptable at an architect's drafting table or at a jeweler's bench. Experience, experiment and the employment of sight-meters are rendering it feasible to be explicit as to the foot-candle requirements on various working planes.

Provision of equipment. As a library building needs to be designed primarily for work and service, so the fittings should be made and selected with these ends in view. This applies to book-stacks, which a few builders have studied with reference to storage requirements and efficient use. It holds also for furniture, some articles of which are peculiar to libraries, and all of which demands superior craftsmanship and durability. The recommendations of librarians regarding equipment are that there be no improvising, no sacrifice of skilled workmanship, no obligation to accept a lowest bid, no sub-letting without full guarantees on quality, and no awarding of jobs to work shops in state or municipal institutions.

Postword. Probably this article contains nothing which would not hold in principle for a building project of any kind. In the case of libraries, disregard of the precepts has sprung largely from ignoring of the functions to be performed. Readers wishing to go further into building requirements as librarians see them may like to consult the titles in the appended list:

Bostwick, A. E. Librarian's ideas of library design. Arch. Forum 47:507-512, Dec., 1927.

Gerould, J. T. College library building, c1932. American Library Association.

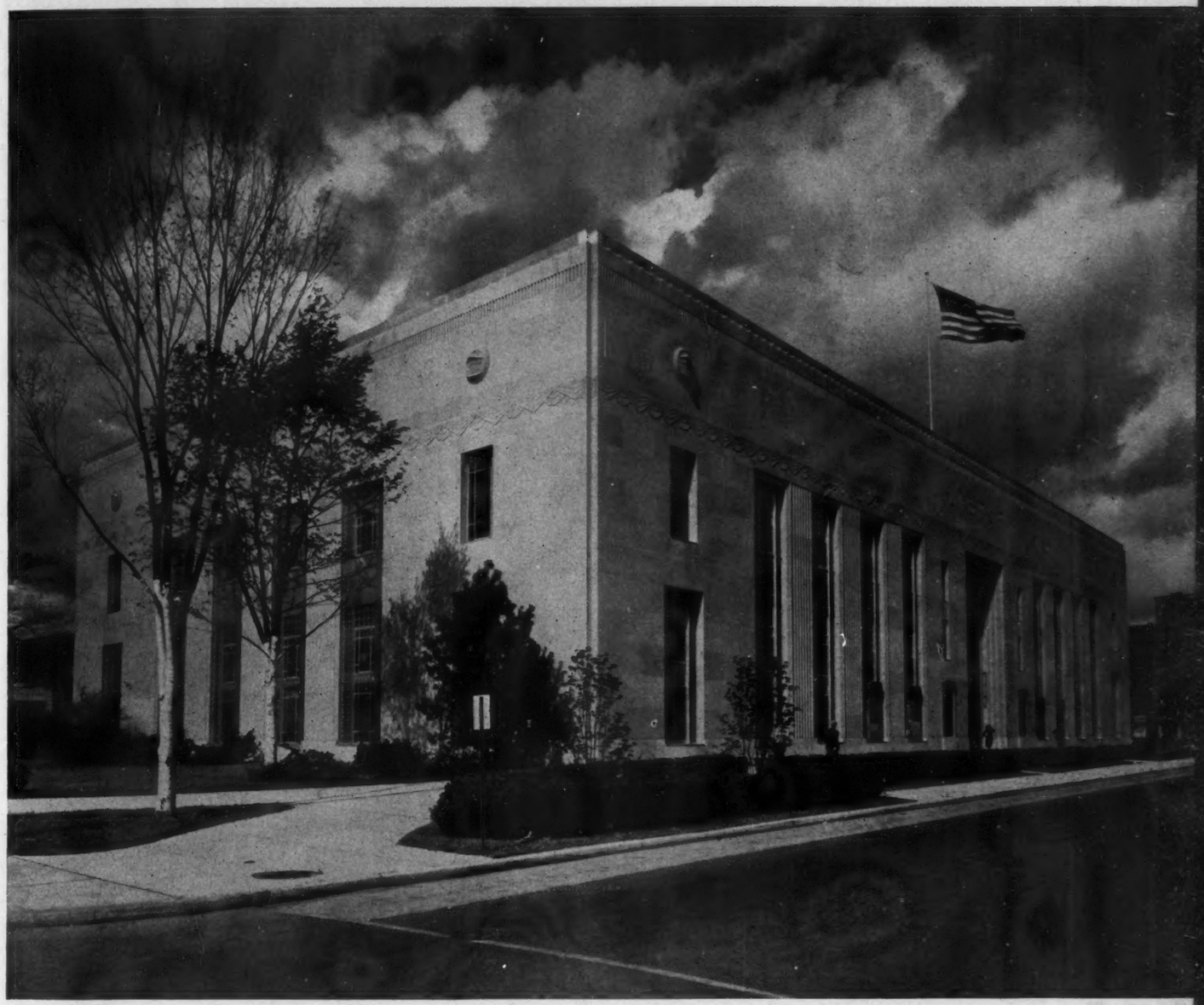
Hadley, Chalmers. Library buildings, 1924. American Library Association.

Hanley, E. R. College and university library buildings, 1939. American Library Association.

Hirshberg, H. S. Elements of the library plan, 1930. American Library Association.

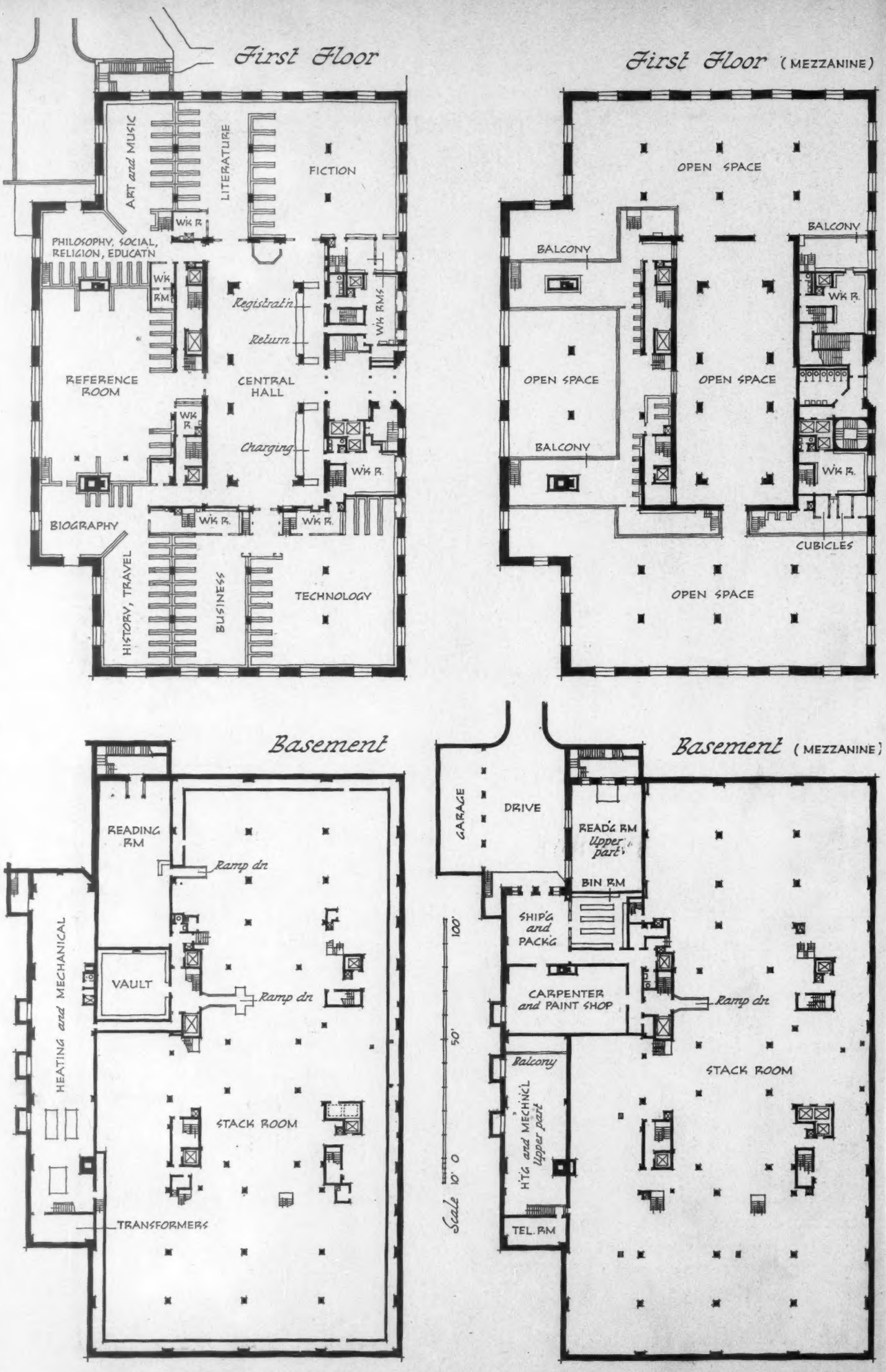
Lowe, J. A. Small public library buildings, 1939. American Library Association.

Wheeler, J. L. and Githens, A. M. The American public library building. Scribner's, 1941.



THE NEW BUILDING OF THE TOLEDO PUBLIC LIBRARY, FOUNDED IN 1838, WAS DESIGNED WITH THREE OBJECTIVES IN MIND, WE ARE TOLD BY ALFRED A. HAHN OF HAHN & HAYES, ARCHITECTS & ENGINEERS. THESE WERE: TO MAKE AVAILABLE TO THE READING PUBLIC THE PRESENT BOOK COLLECTION OF 400,000 VOLUMES; TO PERMIT FLEXIBLE EXPANSION OF THE COLLECTION TO 1,500,000 VOLUMES DURING THE ESTIMATED EFFICIENT LIFE OF THE STRUCTURE; AND TO GIVE PROPER CARE TO THE PRESENT AND FUTURE COLLECTION. THE FIREPROOF BUILDING IS AMPLY LIGHTED AND HAS EXCEPTIONAL EQUIPMENT FOR AIR CONDITIONING, VENTILATION, AND PROTECTION AGAINST DUST, VERMIN, FUMES, AND DAMPNESS. AT THE SAME TIME, HEALTHFUL AIR IS PROVIDED FOR LIBRARY USERS AND THE STAFF. IN NO OTHER LIBRARY ARE THE ACOUSTICAL TREATMENT AND THE HEATING AND VENTILATING SYSTEMS MORE HIGHLY DEVELOPED. THE BUILDING REPRESENTS AN EXCEPTIONALLY FINE SOLUTION OF THE "OPEN PLAN" TYPE WITH A SINGLE LOFTY ENTRANCE HALL, ALL ADULT READING AT SIDEWALK LEVEL, AN UNUSUALLY HIGH PERCENTAGE OF READING SPACE, AND REDUCTION OF VERTICAL TRAVEL TO A MINIMUM FOR LIBRARY USERS AND STAFF. THE SETTING OF LAWNS AND PLANTING REDUCES TRAFFIC NOISE AND ASSURES LIGHT

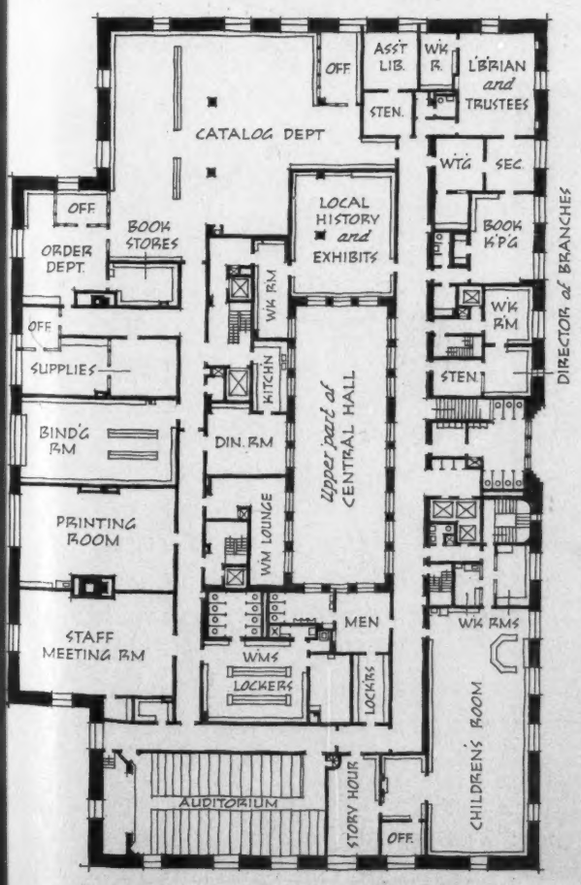
PUBLIC LIBRARY, TOLEDO, OHIO — BY HAHN & HAYES, ARCHITECTS



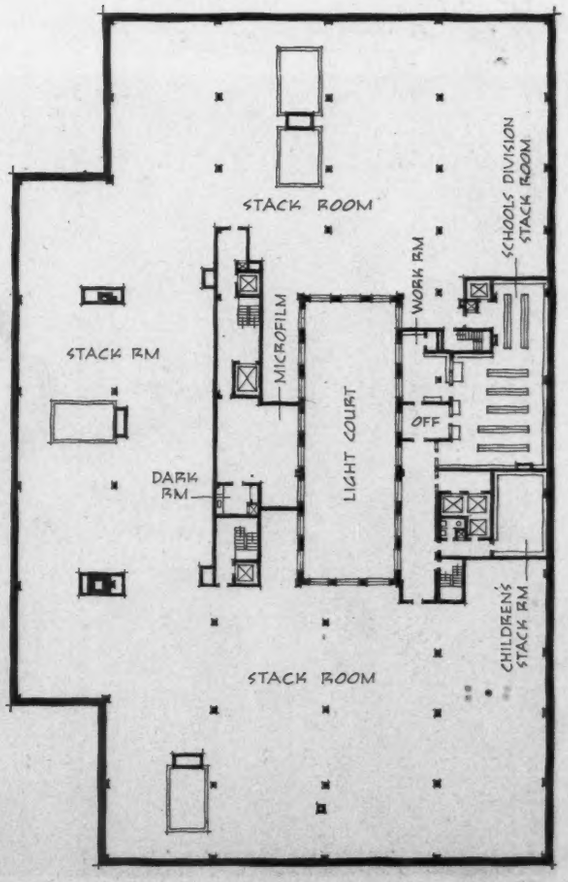
PUBLIC LIBRARY, TOLEDO, OHIO — BY HAHN & HAYES, ARCHITECTS

VIEW OF THE CENTRAL HALL LOOKING TOWARD ENTRANCE (LEFT). NOTE WELL-LIGHTED GLASS MURALS

Second Floor



Third Floor

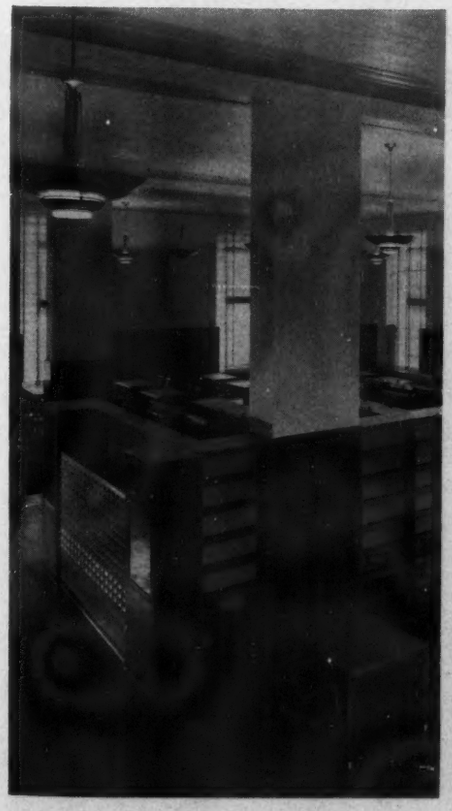


PUBLIC LIBRARY, TOLEDO, OHIO — BY HAHN & HAYES, ARCHITECTS

THIS VIEW OF THE GENERAL REFERENCE ROOM SHOWS THE MEZZANINE CLEARLY. THE LINES OF CASES, ALSO SHOWN BELOW, CAN BE MOVED AS DEPARTMENTAL NEEDS DICTATE. THE BUILDING IS NOTABLE FOR ITS LIBERAL USE OF GLASS — THE WINDOWS UTILIZING GLASS BLOCKS AS WELL AS CLEAR PANES, AND STRUCTURAL GLASS, MIRRORS, AND GLASS MURALS EMPLOYED IN FURNISHING AND DECORATING THE INTERIOR. IN ADDITION TO THE PUBLIC ELEVATORS, A SYSTEM OF LIFTS (ELECTRIC AND MANUALLY-OPERATED) ALSO WAS INSTALLED TO CONVEY BOOKS AND MATERIALS FROM THE STACKS TO THE REFERENCE AND READING ROOMS. FLUORESCENT LIGHTING IS USED FOR THE STANDING BOOK CASES AND SEMI-INDIRECT OVERHEAD LIGHTING PROVIDES THE GENERAL ILLUMINATION. ALL READING ROOMS ARE CEILED WITH CORK ACOUSTICAL MATERIAL AND FLOORS ARE RUBBER TILE. THE EXTERIOR IS LIMESTONE

PUBLIC LIBRARY, TOLEDO, OHIO — BY HAHN & HAYES, ARCHITECTS

VIEWS OF THE FIRST FLOOR READING ROOMS FROM MEZZANINE, AND DETAIL OF A TYPICAL WINDOW



PUBLIC LIBRARY, TOLEDO, OHIO — BY HAHN & HAYES, ARCHITECTS

THE CHILDREN'S READING ROOM IS DECORATED ABOVE THE DARK PINE WAINSCOTING WITH A BAND OF JADE-GREEN STRUCTURAL GLASS ON WHICH SCENES FROM FAVORITE STORIES ARE PORTRAYED. THE STURDY FURNITURE IS ALL OF MAPLE. ONE OF THE COUNTERS IN THE CENTRAL HALL IS SHOWN BELOW

PUBLIC LIBRARY, TOLEDO, OHIO — BY HAHN & HAYES, ARCHITECTS

SMALLER PUBLIC LIBRARY BUILDINGS

BY TALBOT F. HAMLIN

The architectural problem of the library is essentially a simple one. However complex its mechanical details, at heart it is but a study in the relation of three elements: books, readers, and the devices and personnel necessary to make the connection between them. Around this trio the entire problem devolves, and all good libraries indicate their close connection.

The reader problem is perhaps the simplest. One needs adequate and welcoming entrances which shall at the same time be easy to control, for books have a strange attraction to the kleptomaniac; one needs light, pleasant, and roomy places for reading; and one needs also, naturally, those checkrooms and toilet facilities and other similar services which public buildings nearly always require. Yet this simplicity becomes more complex on a closer examination. Reading itself is not one but many things, and in any except a purely reference library many of the readers come merely to bring back books they have borrowed, to borrow others, and to take them home for reading there. A really good library must therefore, insofar as it is concerned with the public, attempt some kind of arrangement which shall be suited to all the different kinds of readers and the different kinds of reading.

There will be readers who come in merely to "kill" a few minutes between engagements, or because it is pleasanter to loaf inside than outdoors. They cannot be disregarded, for who knows what sudden spark may be kindled in even the most inattentive *flâneur* through books and magazines, by a stray sentence or a stray word? For him there must be places where such literary dawdling is pleasant, where there are many magazines easily obtainable, and where perhaps also there may be certain books of reference, anthologies of verse and essays, and similar types of reading "in small packages." Such a reader will never consult a catalogue, for he does not know what he is looking for, and he brings with him but a vague curiosity. There will be children, eager, full of energy, apt to mischief but apt also to enthusiasm; they must be welcomed, their curiosities stimulated, their search for amusement led on naturally from plane to plane of increasing appreciation. Since they are likely to disturb more serious readers, they should probably have a separate room—a room so designed, with gay colors and places for interesting pictures, with low bookshelves to bring the books within their reach, and tables and chairs designed for various children's sizes, that they will come to feel that the place is in a sense a kind of second home, and they will learn to have naturally good manners because they are interested and happy, and consideration for others because their own concentration demands it for themselves. There will be "serious" readers who come to the library knowing what they want, eager to find it, and demanding little besides quietness and a modicum of comfort. They will want a card catalogue placed for easy consultation, and perhaps shelves of the more serious reference books close to their hand and use.

Rooms for readers generally, it would seem,

must have ample daylight and, if possible, some windows with attractive views, for even the most enthusiastic student likes occasionally to look up from his book and rest his eyes by focusing them on something far away. Such a room, too, it would seem, should have a certain height, for ample height is an excellent killer of extraneous noise, and the sense of height gives a feeling of lift and takes away that sense of impregnable enclosure that a crowded low room so often possesses.

It is in the design of reading areas, perhaps the most important parts of the library, that architectural imagination has been most conspicuously lacking. Standardized plan types developed for mechanical efficiency of supervision and administration do not always yield rooms of the pleasantest proportions, and in the design of many—one might almost say most—small libraries, particularly branch libraries in cities, this same kind of mechanical feeling has crept disastrously into the interior atmosphere, and a certain type of bleak, institutionalized appearance makes many a library reading-room something almost to be feared.

Nor is the occasional attempt to make rooms over-domestic, as though they were merely enlarged sitting-rooms, much more successful. This type of library room, frequent in village libraries built fifteen or twenty years ago, has a kind of artificial charm that looks pretty in photographs but is not ideal for library use. A living-room exists as much for social purposes as for individual reading, and one must believe that the reader comes to the library to read by himself and not to talk with his fellows. The problem of the small library reading-room is thus not a living-room problem any more than it is a problem in mere mechanical efficiency. It is a problem to be faced as something unique, something that shall be pleasant and human, to be sure, with colors that lead to repose and eye rest and occasional lovely views for relaxation, but a room designed above all else around reading.

The illumination of such a room, both by day and night, is an essential part of this problem; but illumination, we must remember, is as much a question of light quality and variety as it is of foot-candles. Diffusing glass in windows, if used at all, must be employed with discretion so as not to develop any feeling of claustrophobia. Indirect lighting must never create such a brilliant ceiling as to claim hypnotically the upward attention of the eyes. Low table lights must be designed to prevent glare, both direct and as reflected from book pages. Perhaps with the development of luminescent lighting some type of low-intensity fixture of large size—such, for instance, as long tubes at the proper height over a table—may solve all these questions, but the problem is still an open one. In fact, in the whole character proper to a reading-room, there is a challenge to the human imagination of all architects as well as to their technical knowledge, and much finer results can be developed than any thus far achieved.

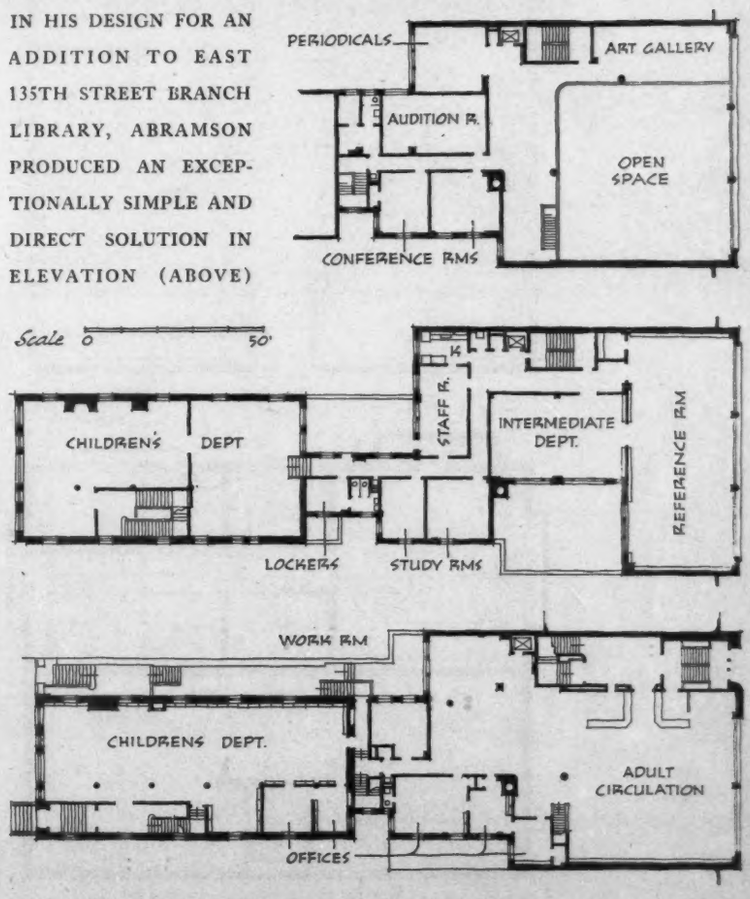
Then there are books. In a sense, books are the reason for the library; yet from the human point of view it is the reader rather than the book which controls the major public elements of the design. The storage of books is a difficult and an expensive matter, but in this the small library does not face the almost insuperable problems of the continually growing contents of a large library. The branch public library or the small local library will probably aim at a collection which grows slowly, if at all, beyond some definitely assumed optimum number of volumes. Much of its content will be of fairly ephemeral type, in which the older works are discarded as the newer ones are obtained, so that it is only in its relatively small reference or "learned" sections that large growth is to be expected.

Thus in the small library there is little need for an enormous stackroom, if indeed any stackroom at all is required. If the purpose of the library is to bring the readers into the closest possible touch with the riches enclosed between book covers, it would seem that so far as it is practicable the small library should be of open-shelf type; for the ordinary reader in this type of building will frequently, even when he comes to borrow, like to browse and pick by choice from the

appearance of the book itself rather than through the impersonal face of a catalogue card. Nevertheless, even in comparatively small libraries, there will always be certain books—bound volumes of periodicals, for instance, and perhaps the more valuable scientific and artistic works, as well as some types of books less generally used—which it is desirable and economical to store in stack areas; and it is in this stack area that the greatest opportunity for normal and predictable increase may be designed. For a small library the stack need only be a small room with standard stacks installed in it—if possible, all on one level to save steps—but it is often advisable to place this stackroom in a wing or area with a free end facing an unused portion of the lot, so that if the town or the library should grow unexpectedly there would be room for future enlargement. This consideration may frequently play an important part in the general placing of the building on the lot and the basic relationship of its exterior masses.

For the other books, placed on open shelves, there are numerous possible schemes—al-

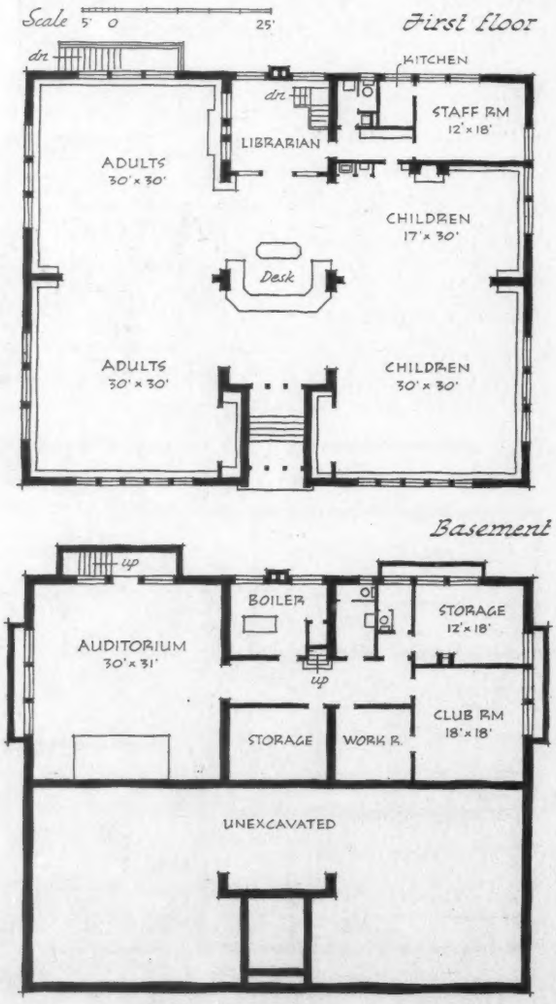
IN HIS DESIGN FOR AN ADDITION TO EAST 135TH STREET BRANCH LIBRARY, ABRAMSON PRODUCED AN EXCEPTIONALLY SIMPLE AND DIRECT SOLUTION IN ELEVATION (ABOVE)



THE EAST 135TH STREET BRANCH OF NEW YORK PUBLIC LIBRARY—LOUIS A. ABRAMSON, ARCHITECT

cove types, in which ranges of double-faced shelves separate alcoves with tables; wall shelves; and bookcases freestanding on the floor. In a public library where supervision is of primary importance, the alcove system has many disadvantages, and if it is used the bookcases between the alcoves must be low enough to permit good visibility over them. If used discreetly, they have the advantage of giving a certain sense of pleasant and studious intimacy to the alcove tables, and may break up an overlarge room into something more human in scale. In many cases a portion of the reading space will be devoted to freestanding bookcases arranged with wide aisles between them for pleasant browsing and easy supervision, and another portion kept as open as possible to suggest an almost domestic informality.

It is in this point that the architect will have some of his major decisions to make, for the arrangement of the books and furniture can produce in the same interior space an expression of charm and human beauty, or a dull and mechanical institutionalism. It is in this element, too, that perhaps the major fault of many American small libraries lies, for with use of ample space and with furniture sufficiently expensive there is produced only the sense of a cold and impersonal boredom. Books in themselves may form a magnificent decoration for a room, as for instance in the Prunksall of the Hofbibliothek in Vienna; and, though our customary habit of library book-binding often leads to drab shelves of monotonous dull blues and dull greens, even then, in this denatured state, lines of books have a certain invitation. The true library room will be designed around them, and its "architecture" minimized or restrained to give the books the major importance. One might say that the simplest possible shapes, the clearest and most easily intelligible spacings, combined with well distributed light from pleasantly proportioned sources, is the best way to create a book room. Yet color may be introduced, and should be much more brilliantly and daringly used than is common in library practice. Clear areas of agreeable colors will not only give life to the effect, but they will also have a definite therapeutic value in giving eye rest after a too great intensity of concentration on white paper and black type.



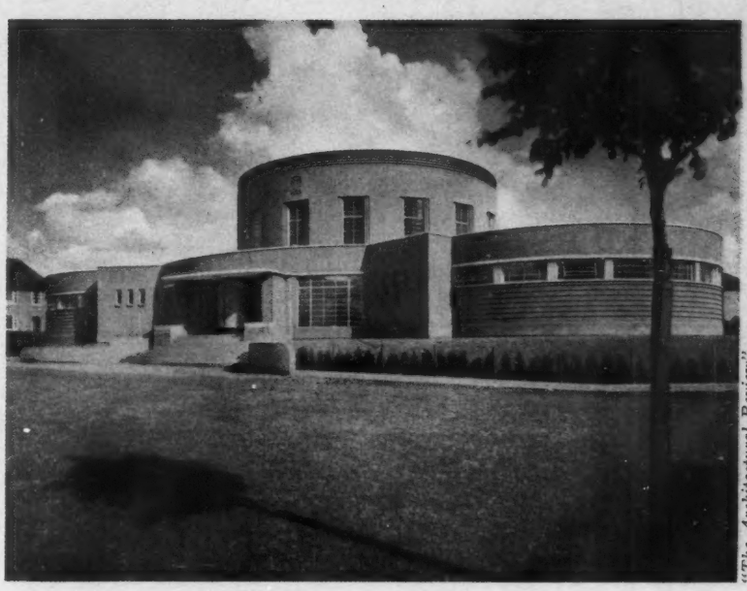
KENT BRANCH LIBRARY, TOLEDO, OHIO, BY HAHN & HAYES, ARCHITECTS & ENGINEERS, OF TOLEDO

The third element in the library, the administration portion, the particular bailiwick of the librarian, is perhaps the most difficult problem of all. There is not a public library which does not suffer from understaffing in one way or another; for public bodies, though they may see fit to pay money for books or buildings, can see but grudgingly the necessity for people to run the building and take care of the books. The architect in his design has to make up this deficiency. He has to see that in a small library, as far as possible, the entire reading area can be supervised from one point, a point which shall also control the public's entrance and exit. This same place, where naturally the delivery desk will be placed, must also be in closest possible communication with the stack

area and with the various working areas which the librarians will need. There is a tremendous amount of work even in the small library between the time a case of books is received at the door or at the service entrance and the time when the same books are handed over to the readers. They must be recorded, catalogued, classified, placed in their correct positions, and the catalogue cards made or obtained and filed. There is an enormous amount of work after the book is in place, in checking its circulation, in repairing or arranging for its rebinding when the book is old and damaged. There will also be constant demands upon the staff time to answer all sorts of questions.

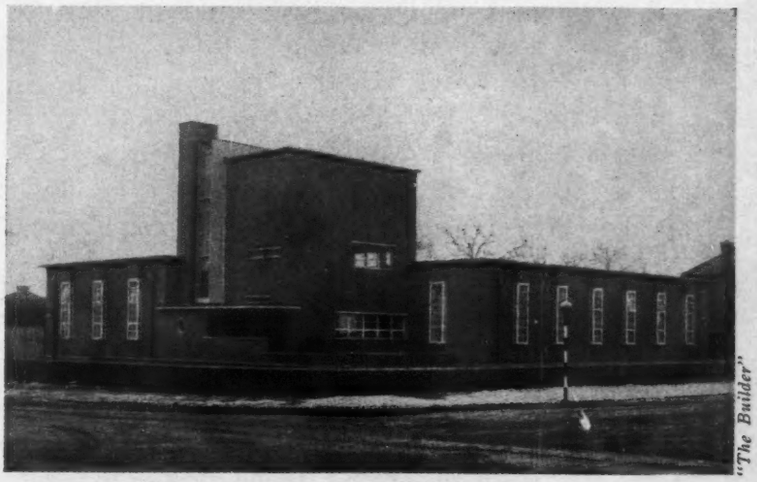
The greater number of these problems have been carefully studied in this country for nearly a half century, and in the huge flood of small libraries built over the country in the earlier years of the 20th Century certain basic plan types were worked out which have become almost standardized. The librarians' desk will be in the center, opposite the entrance, and forward, with reading areas open on each side—one perhaps for adults and one for children. Immediately behind the desk will be the librarians' offices and workrooms (sometimes on two floors), and also the stackroom, if any. Often the building is raised high above the ground in order to give a well lighted basement, which will contain an auditorium with a separate entrance and a service and delivery entrance to the unpacking- and workrooms in connection with book servicing. Such a scheme is seen in the Kent Branch Library at Toledo, Ohio, recently altered by Hahn and Hayes, where the whole has been brought into a simple plan (across-page). In this case there is no stackroom. Other types in which a stackroom is incorporated are likely to develop into L and T shapes, and many examples of these have been built and work excellently.

Yet this standardization of type, developed from a careful attention to administration efficiency, has not been architecturally an unmixed blessing. It has tended to make the designer think too frequently in terms of processes rather than of purposes. It has tended at times to limit his creative approach

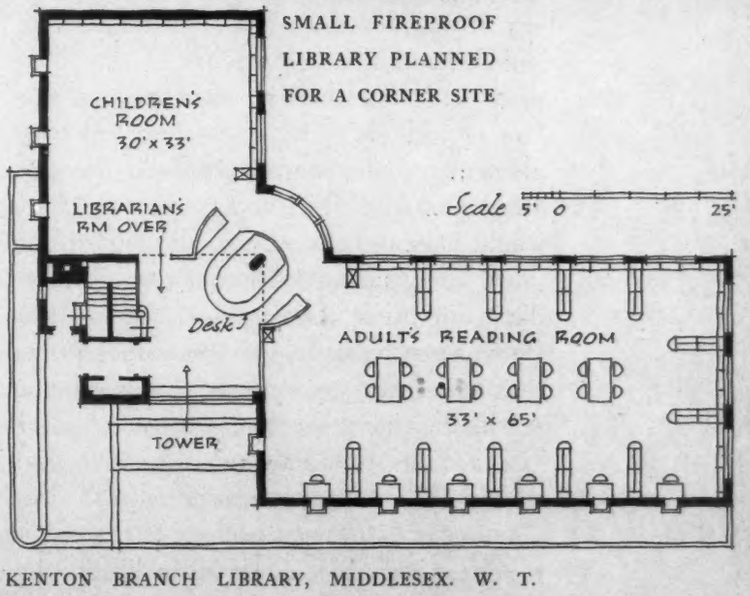


"The Architectural Review"

THIS LIBRARY BY SYMINGTON, PRINCE & PIKE, ON A TRIANGULAR SITE IN THE PARK ESTATE, LEICESTER, ENGLAND, IS "DIFFERENT" IN PLAN, THREE CIRCLES TANGENT TO A CENTRAL ROTUNDA



"The Builder"



SMALL FIREPROOF LIBRARY PLANNED FOR A CORNER SITE

KENTON BRANCH LIBRARY, MIDDLESEX. W. T. CURTIS & H. W. BURCHETT, ARCHITECTS, F.R.I.B.A.

to the problem. The great architect must attack the problem with a mind clear of all of these conventional types, although he must understand the reasons which brought them to birth. To the processes he must add the human element, and his imagination must go beyond a concept of accepted adequacy.

In the larger city branch libraries where departmentalism has begun and where there must be an especially large and carefully arranged children's department, multistory types have usually proved the most economical. Ideally, a children's department should have a completely separate entrance and no connection with the rest of the library except through its close attachment to the central service elements. Yet in many cases and on the average narrow city lot this separate entrance must be dispensed with, and the segregation achieved through the arrangement of different departments on different floor levels served by one public stair. One of the most interesting developments of such a city branch library is the 135th Street Branch of the New York Public Library, now under construction. It was designed by Louis Allen Abramson under the supervision of the Department of Public Works, New York, Irving A. Huie, Commissioner, and is particularly interesting in its handling of mezzanines and balconies, so that some rooms gain the advantage of extra height.

In many communities the library serves as much more than a simple machine for reading. It may become a sort of cultural center and demand a certain amount of exhibition space or even a small separate museum gallery in addition to its auditorium and book elements. The boundary between the fine arts is not so definite as Lessing's *Laokoön* would have us believe; for, although to the purist the illustrated book may be a contradiction in terms, to the ordinary person illustrations may be meaningful as well as attractive, and it is frequently true that the person sensitive to literature will be sensitive to the visual arts as well. This, too, the architect of the small library must bear in mind.

The last question, and perhaps to the public the most important question, in library design is of course its total visual impact upon the observer—its æsthetic character. The library is frequently a memorial, but it should never have the dead ostentation of the monument. It is a building essentially for human beings, who come to it to amuse themselves or to learn. It must invite them, be gentle with them; it must never fight them with the arrogance of pomposity.

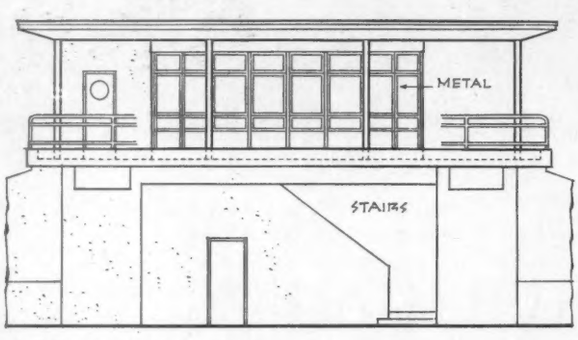
Furthermore, although the perfect library is a perfect machine for reading, and although the technical studies of librarians have developed sufficiently effective mechanisms to help them in their tasks, the architect must remember that all of this mechanism is but a means to an end and that a library, if it is to express anything, should express its major purpose of enjoyment and intellectual development, and not merely the means and processes by which that is made possible. Let each part of the building develop its own natural types of opening; let surfaces be pleasant and simple, openings wide and clear and inviting; let there be, at least in moderate climates, some kind of arrangement for outdoor reading, some kind of a feeling of definite connection between the building and the ground on which it stands. Out of these, if treated with creative imagination, if integrated into a single whole with clarity of design, the true character of the real library will gradually grow.

In the past we have had many libraries in which the public nature of the building, coupled with misguided civic pride, has forced a pompous and impersonal heaviness; we have had libraries in which a reaction from this feeling has produced effeminate and artificial charm; but we have had very few which, whatever their style, somehow accepted the conditions of library design and developed from them a simple, direct, modest, and human appeal. One such, which seems to achieve quiet dignity, is Abramson's 135th Street Library, with its pleasantly proportioned wall surfaces, large windows, and protected roof terraces. In this application of the newer forms to small library design the English have perhaps gone further than we, and several of their newer branch and small town libraries achieve exteriors as attractive as they are contemporary.

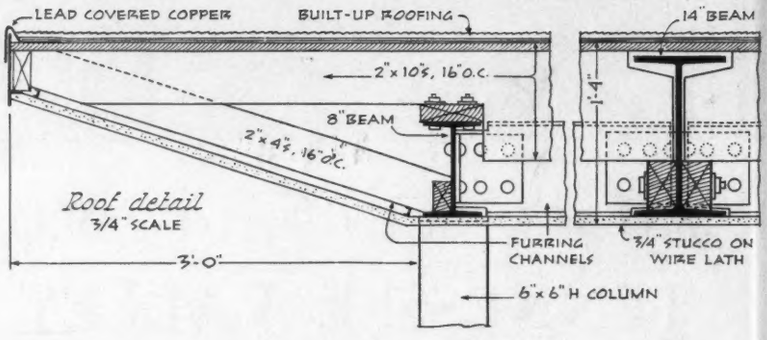
SOME RECENT WORK OF THE TENNESSEE VALLEY AUTHORITY

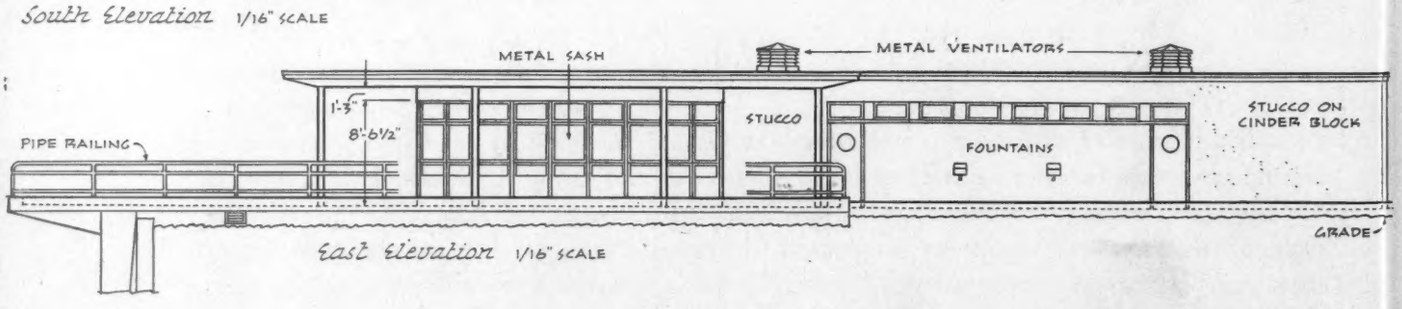
ROLAND A. WANK, PRINCIPAL ARCHITECT

FOUR OF THE SMALLER BUILDINGS OF THE TENNESSEE VALLEY AUTHORITY DEVELOPMENT THAT MAY BE CONSIDERED REPRESENTATIVE OF THE DESIGN PRINCIPLES EVOLVED IN THIS LARGE-SCALE UNDERTAKING ARE PRESENTED HEREWITH IN PHOTOGRAPHS, SUPPLEMENTED BY PLANS, SECTIONS, AND CONSTRUCTION DETAILS. THESE EXAMPLES ARE MORE SIGNIFICANT AS TYPICAL SOLUTIONS THAN AS INDIVIDUAL BUILDINGS. THE "VISITORS' BUILDING" SHOWN ABOVE AND ON PAGES 476 AND 477 IS LOCATED ON THE NORTH EMBANKMENT OF CHICKAMAUGA DAM; THE "CONCESSION BUILDING AND COMFORT STATION" SHOWN ON PAGES 478 AND 479 IS ALSO AT THE BOAT HARBOR NEAR THE SOUTH ABUTMENT OF CHICKAMAUGA DAM; THE "OVERLOOK BUILDING" SHOWN ON PAGES 480 AND 481 IS LOCATED ON THE NORTH ABUTMENT OF HIWASSEE DAM; AND THE "HARBOR MASTER'S OFFICE" SHOWN ON PAGE 482 SERVES THE CHICKAMAUGA DAM BOAT HARBOR. DESIGNERS OF THESE BUILDINGS WERE TVA ARCHITECTS HARRISON S. GURNEE AND MARIO BIANCULLI; THE PLANS WERE CARRIED TO COMPLETION UNDER THE SUPERVISION OF CARROLL A. TOWNE AND GEORGE L. RICHARDSON; THE STRUCTURES WERE BUILT BY TVA'S CONSTRUCTION AND MAINTENANCE DIVISION. PHOTOGRAPHS BY THE TVA GRAPHIC ARTS SERVICE, CHARLES KRUTCH, CHIEF

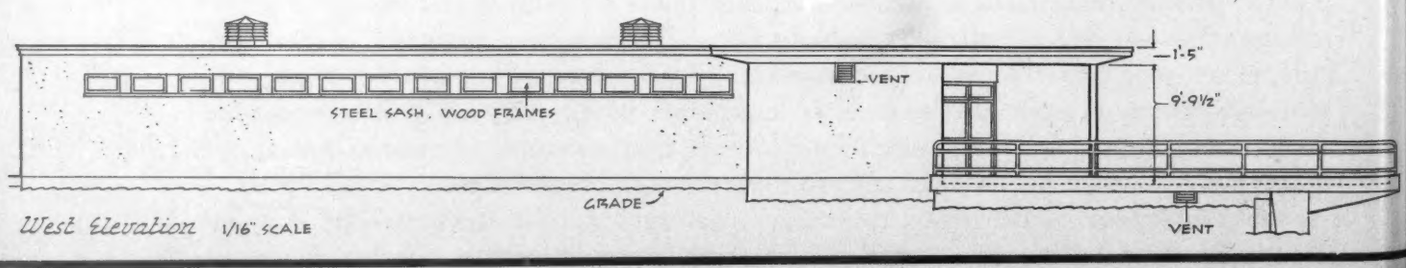


South Elevation 1/16" SCALE

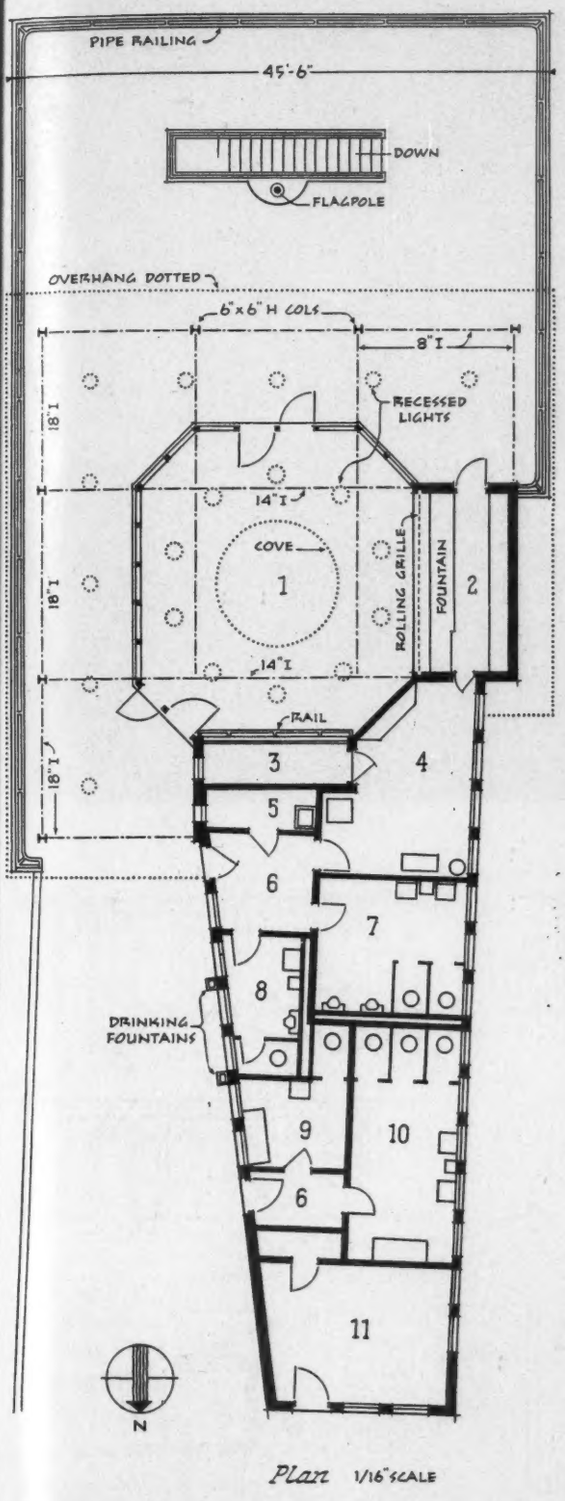




East Elevation 1/16" SCALE

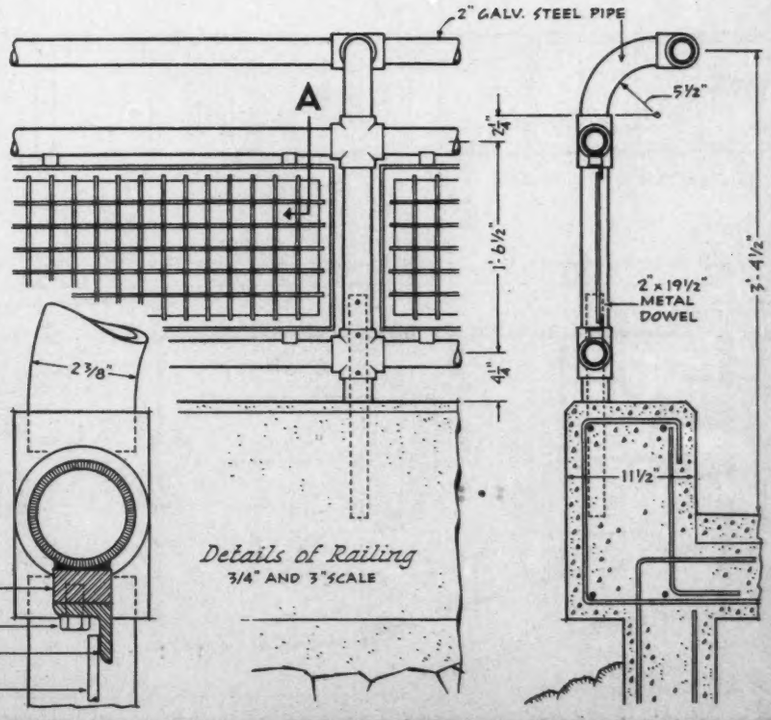


West Elevation 1/16" SCALE



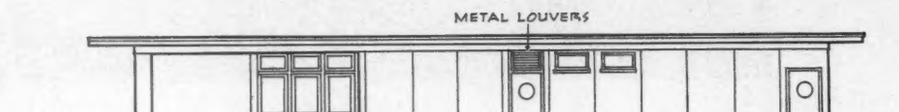
Plan 1/16"SCALE

1 VISITORS ROOM
2 SODA FOUNTAIN
3 DISPLAY
4 STORES
5 JANITOR
6 VESTIBULE
7 WHITE MEN
8 COLORED MEN
9 COLORED WOMEN
10 WHITE WOMEN
11 GUARDS' OFFICE

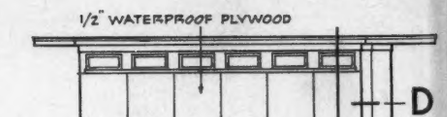


Details of Railing
3/4" AND 3"SCALE

Section at A

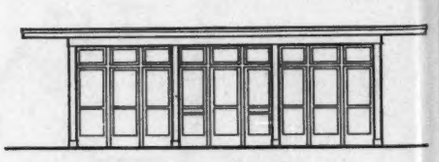


West Elevation 1/16" SCALE

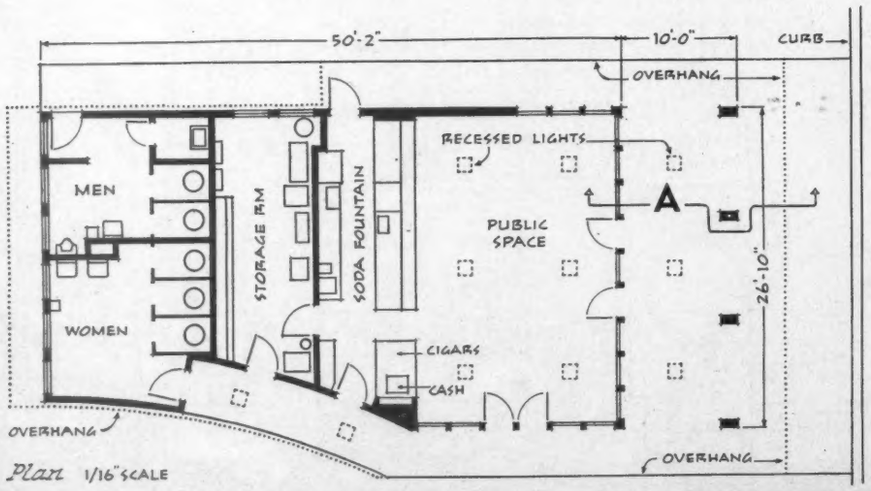


South Elevation B

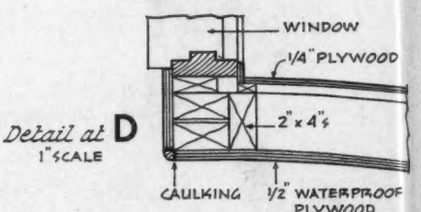
East Elevation 1/16" SCALE



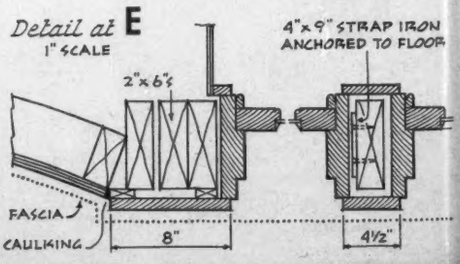
North Elevation



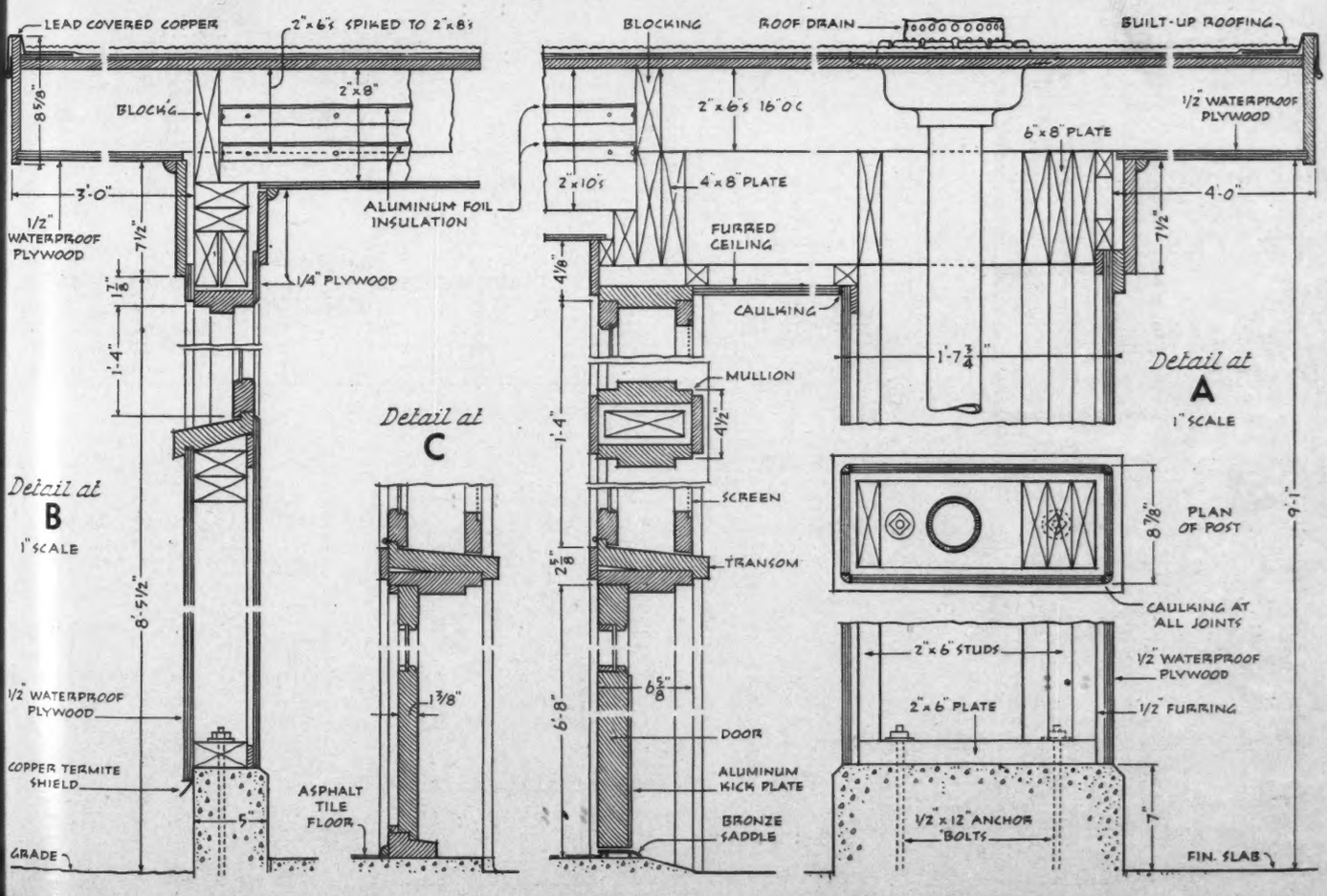
Plan 1/16" SCALE

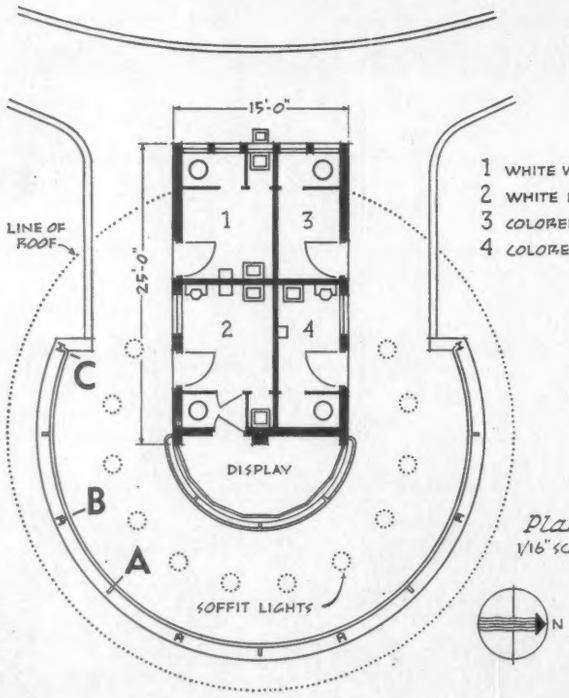


Detail at D 1" SCALE



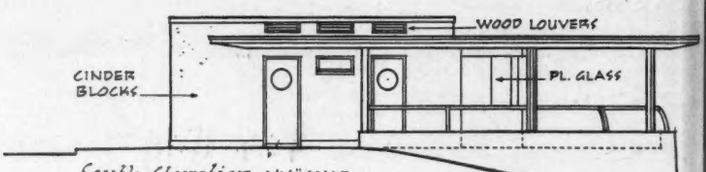
Detail at E 1" SCALE


LEAD COVERED COPPER
2"x6"s SPIKED TO 2"x8"s
BLOCKING
2"x8"
8 5/8"
3'-0"
1/2" WATERPROOF PLYWOOD
7 1/2"
17"
1'-4"
1/4" PLYWOOD
ALUMINUM FOIL INSULATION
8'-5 1/2"
1/2" WATERPROOF PLYWOOD
COPPER TERMITE SHIELD
5"
GRADE
Detail at B
1" SCALE
Detail at C
1 3/8"
ASPHALT TILE FLOOR
BLOCKING
ROOF DRAIN
BUILT-UP ROOFING
2"x6"s 16" O.C.
2"x10"s
4"x8" PLATE
FURRED CEILING
4 1/8"
CAULKING
MULLION
1'-4"
4 1/2"
SCREEN
TRANSOM
2 5/8"
6'-8"
6 5/8"
DOOR
ALUMINUM KICK PLATE
BRONZE SADDLE
6"x8" PLATE
1/2" WATERPROOF PLYWOOD
4'-0"
7 1/2"
1'-7 3/4"
Detail at A
1" SCALE
8 7/8"
PLAN OF POST
9'-1"
CAULKING AT ALL JOINTS
2"x6" STUDS
1/2" WATERPROOF PLYWOOD
2"x6" PLATE
1/2" FURRING
1/2" x 12" ANCHOR BOLTS
7"
FIN. SLAB

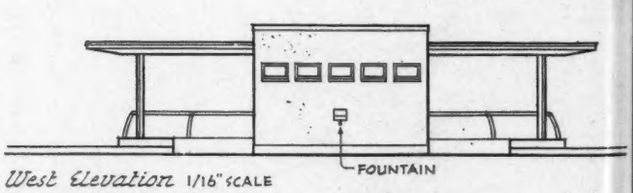


1 WHITE WOMEN
2 WHITE MEN
3 COLORED WOMEN
4 COLORED MEN

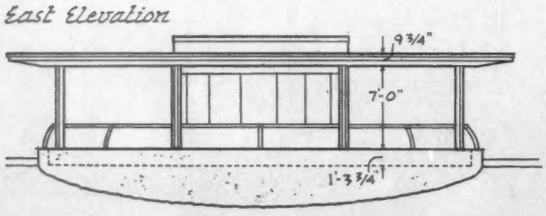
Plan 1/16" SCALE



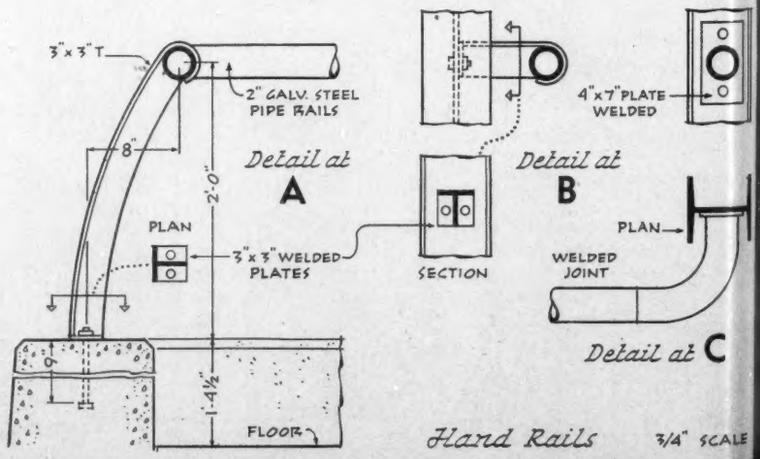
South Elevation 1/16" SCALE



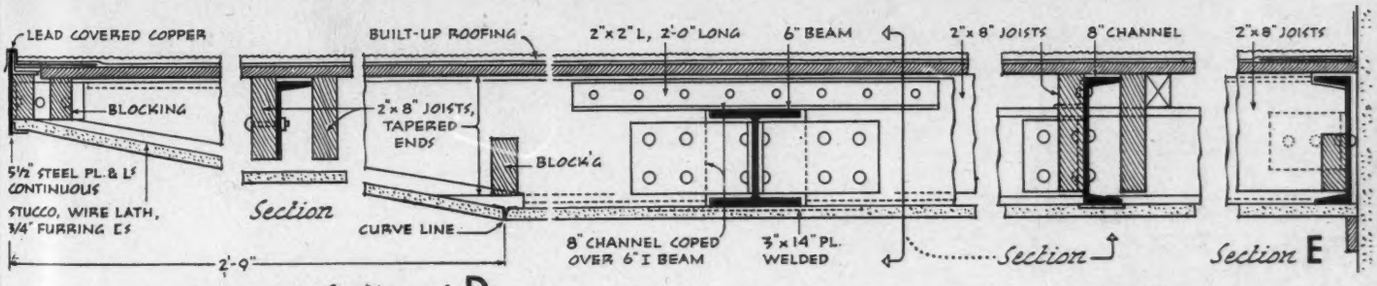
West Elevation 1/16" SCALE



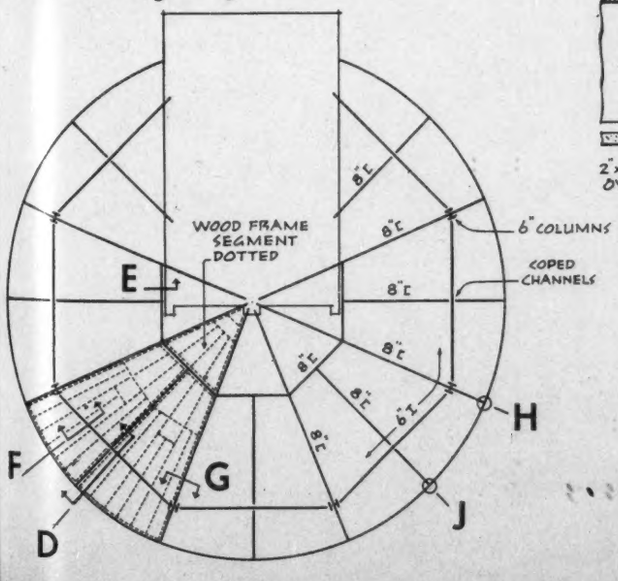
East Elevation

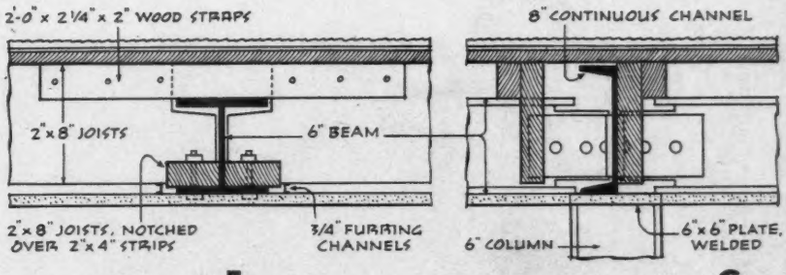


Hand Rails 3/4" SCALE

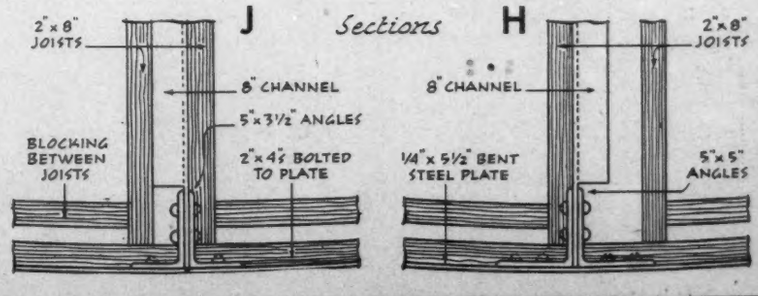


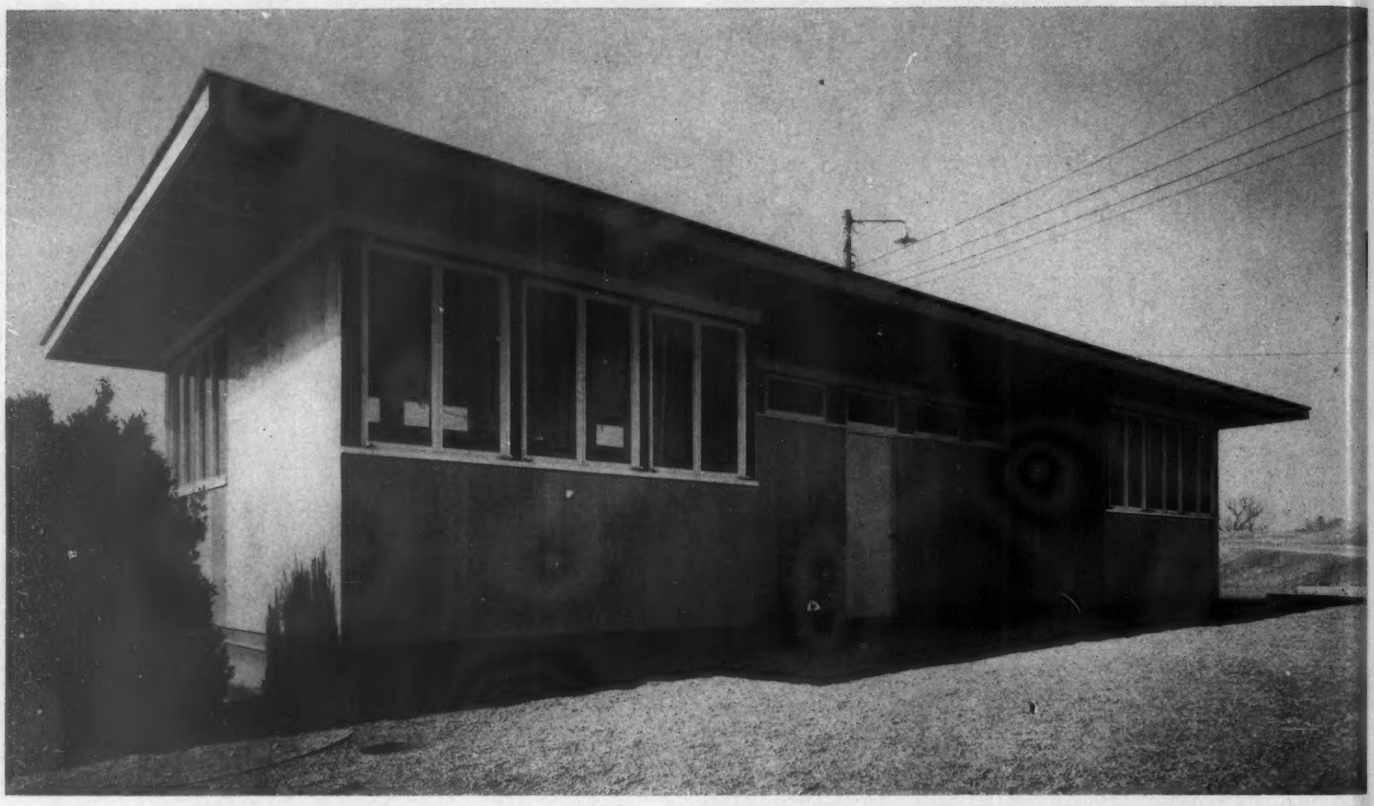
Roof framing diagram

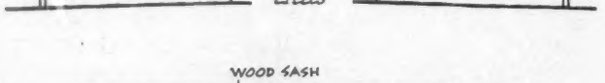


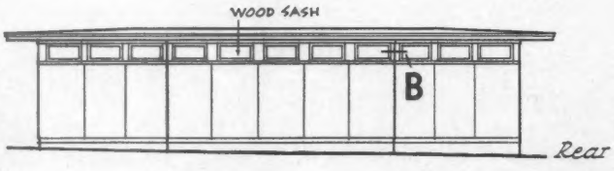


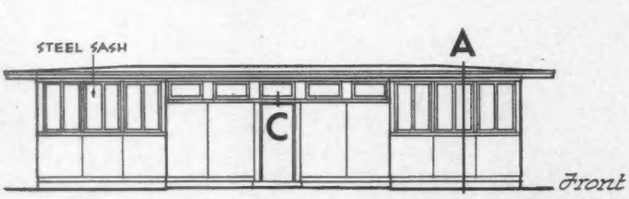
ALL SECTIONS 1" SCALE

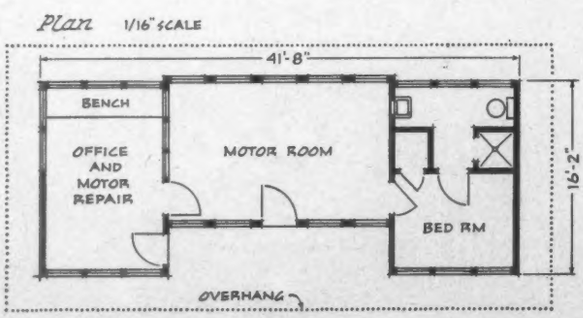


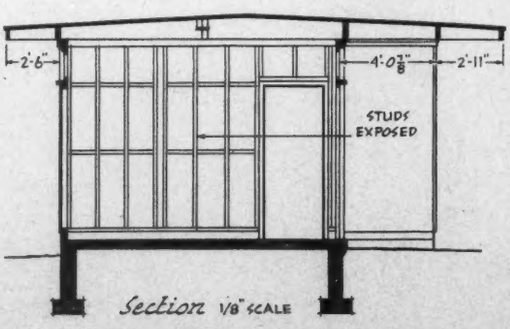


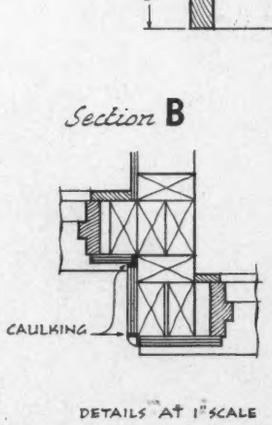

Ends

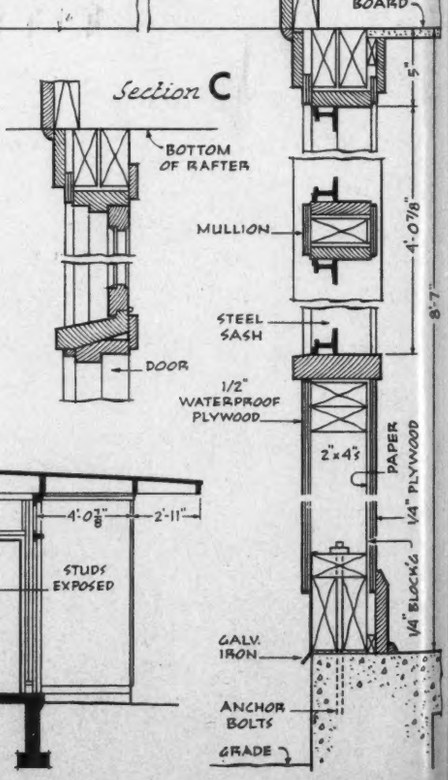

WOOD SASH
B
Rear


STEEL SASH
A
C
Front


Plan 1/16" SCALE
41'-8"
BENCH
OFFICE AND MOTOR REPAIR
MOTOR ROOM
BED RM
16'-2"
OVERHANG


2'-6"
4'-0 3/8"
2'-11"
STUDS EXPOSED
Section 1/8" SCALE


Section B
CAULKING
DETAILS AT 1" SCALE


Section at A
2"x 12"x 22'-0" RAFTERS TAPERED EACH WAY
5½"
BLOCKING
TIN ROOFING OVER FELT
INSULATING BOARD
5"
Section C
BOTTOM OF RAFTER
MULLION
4'-0 7/8"
STEEL SASH
8'-7"
DOOR
1/2" WATERPROOF PLYWOOD
2"x4"
PAPER
1/4" PLYWOOD
1/4" BLOCK'G
GALV. IRON
ANCHOR BOLTS
GRADE

YOSEMITE CONVENTION

BY TRAVIS G. WALSH

Journeying from Cleveland to Chicago in glorious solitude, I little realized the gallant and congenial company which was assembling to cross the continent. Breakfast in Chicago, at Harvey's *Dearborn Street* Restaurant was, at best, an impatient ritual to be "liquidated" promptly, for how long had it been since an entire Eastern A.I.A. delegation had boarded a special train bent on invading the citadels of the West Coast?

A word with Ed Kemper, a chuckle with Charlie Ingham, a limerick with Ken Reid, a story (?) with Jim Follin and the introductions to the charming ladies of the party all served to quickly retire any atmosphere of conservatism or restraint on the train. A collection of Pullman cars, with Observation, Lounge, and Dining facilities added, may acquire a "personality" which transcends mere railway transportation. Despite the opulent appointments of the Parlor-Observation Car, the popularity of the Lounge - Bar - Barber - Shop - Shower unit was incontestable. 'Twas here that the social activity of the train acquired emphasis and also here that the stalwarts who spurned decorum and sleep raised lusty voices; perhaps not musical but loud! These frolics were not confined to the sterner sex, for vividly do I remember a distinguished lady-architect efficiently taking the "podium," beer bottle in hand, and leading her enthusiastic colleagues in nostalgic musical folk-lore.

Vignettes of Taos Canyon, Indian Pueblos, a very Spanish-Colonial Santa Fé, and much delightful scenery come quickly to mind on a motor trip which joined the A.I.A. Special at Lamy the same afternoon at 6 o'clock. It would be far too casual, at this point, to neglect a reference to the hospitality of the New Mexico architects, who were our gracious hosts with cocktails at old *La Fonda* in Santa Fé, which is merely another way of stating that very few took places afterwards on the same busses in which they had arrived.

The cool clear air, and the soughing of the pines at Grand Canyon, caressed feverish brows on Wednesday morning. Busses, cameras, and superlatives were the order of the day at this point.

The Arizona Chapter thoughtfully provided rooms at the Hotel for both the ladies and gentlemen of the party and I blush to relate how the latter were soon drawing lots for the bathtub which was found to be adjoining.

Boulder Dam caused much excitement. In the ordinary course of an itinerary, one does not expect to have a man-made triumph follow in sequence one of the "seven wonders of the world." For this reason, many of us felt skeptical as to Thursday's program, but apprehensions were dispelled by this great tribute to architectural and engineering genius.

Boulder Dam straddles the Arizona-Nevada line; it was therefore only natural that luncheon arrangements should include a short excursion into Nevada. The busses charged up the steep grade to Boulder City, Nevada, where the question of edibles was efficiently settled. Striking panoramas of Lake Mead (the artificial lake created by the Dam) were recorded by the numerous "camera fiends"; thus invoking the patience and indulgence of the amiable bus drivers.

A faded but reasonably satisfied company distributed themselves throughout the Convention train at four-thirty in the afternoon. Shortly thereafter, the inevitable "moaning at the bar" was in evidence! Such convivial souls as Sam Homsey, Charlie Ingham, Jim Follin, Charlie Cellarius and numerous others seemed to be continuously involved in vocal striving which should have a ten per cent rating for blend but ninety per cent for the effort! A reference to Eccleston, the congenial Santa Fé agent, should not be omitted inasmuch as his indefatigable presence and lusty voice were always a substantial part of these sessions.

Friday morning, upon leaving the train, the congregation gathered for breakfast at the Californian Hotel in Merced, followed by a ninety-mile bus trip up into the Sierras. This terminated at the renowned and exceedingly beautiful Yosemite Valley. Perchance, it would be proper revenge if this chronicle completely ignored the wonders of Yosemite, since the scattered space arrangements, together with the continuity and overlapping of the Convention sessions, prohibited the amount of attention which the Valley deserved. Be that as it may, one might be regarded as somewhat short of human should he not respond to the towering snow-clad heights, the majesty of great waterfalls, and the lovely Merced River winding about the green carpeted vale—to list only a few of the compelling virtues of Yosemite.

Resuming our chronicle of human events, we would be exceedingly culpable not to make reference to the Reception and Dinner Dance the evening of Saturday, May 17th. This was a somewhat riotous but decidedly enjoyable affair; there were so many more "stags" than ladies that it imposed a challenge on the latter, but this they retired with colors flying.

The Convention recessed early Monday afternoon, permitting those who had not already "played hookey" to motor up to Glacier Point, through eight-foot snow drifts, and look down at the dizzy 3,200-foot drop to the floor of Yosemite Valley. Your humble servant, as guest of Harry Michelsen of San Francisco, and accompanied by Stanley Parker and John Fugard, chose to motor out to Mirror Lake and, returning, visit the

Government Museum. It was at the latter place, I believe, that Stanley Parker (confronted with a slice of Sequoia with annual rings marked with dates as far back as 900 A.D.), with his typical Boston urbanity coined the acme of understatement and said, "It does engender a reasonable degree of humility, doesn't it?" Mayhap, therein is the essence!

The Convention party took a reluctant farewell of Yosemite on the morning of Tuesday, May 20th. Those of you who have seen the California "Big Trees" may disregard this reference but, for most of the Convention party, the stately majesty of the gigantic Redwoods of California leave a deeply etched impression on the mind.

Architects, in general, are irrepressible, even when awe-inspiring factors are predominant; therefore the garrulous is bound to creep in! Witness, if you please, an elderly New York professional with his technical assistant, tape in hand, carefully measuring the base of one of the most noble trees in the Grove (with a cavern capable of accommodating a score of persons); conjure up a vision of numerous individuals taking motion pictures of the entire performance which results in the declaration that the base is precisely sixty-one feet and eight inches in circumference! Contain yourself, if you can, when our own Stanley Parker comes upon the scene, booming, "Some persons have no respect for anything!"

The Convention party found itself in the torrid atmosphere of San Joaquin Valley on the evening of Tuesday, May 20th. In Fresno, at the air-conditioned Hotel California, we foregathered in the Cocktail Lounge for the noble purpose of slaking thirsts and cooling fevered brows. Your chronicler, anxious to avoid the obvious, ordered a "Zombie." Said drink arrived, if you please, in a tall wooden container, with a gaily colored parasol anchored to its top by means of a large wedge of pineapple and three red cherries. Imagine our embarrassment and the astonishment of the multitude! Needless to say, the victim wore the parasol in his buttonhole into Los Angeles and informed the Angelenos that he was "prepared for any kind of weather."

We were not properly prepared for the effusion of our Los Angeles greeting. Possibly, it was because Ken Reid and your humble servant had consulted our itinerary the night before and had remarked that our arrival at eight in the morning and the trip to the "Studios" at ten would permit an interval for a quiet breakfast at the Ambassador and a very swell hot shower; or, possibly, it was the fact that we had never seen the Angelenos in their own habitat before. At all events, the indefatigability of our hosts was appalling! With that intense degree of efficiency which one has come to associate with the name Los Angeles, we discovered that our estimable professional colleagues swarmed over the platforms of their new Union Station with the equivalent of three motor cars for each guest! (more or less exaggerated)

To the tune of Viennese waltzes, lustily broadcast from concealed amplifiers, we were ushered through spacious concourses and courts to a very impressive Harvey Station Restaurant. Occasionally, the music was interrupted by the staccato greeting "train leaving on track 4 for Albuquerque, Emporia, Kansas City, and Chicago." Meanwhile, our genial hosts presided over a bountiful breakfast, taking inventory of the desires and idiosyncrasies of their respective guests. If the "Conventionites" failed in the things they wanted to do, it was not the fault of the Angelenos.

The Annual Convention Dinner the evening of that same day, furnished the "crescendo" and the official finale of the Convention. The preliminaries to the Dinner varied according to the individual. Many spurned the cinema sets and chose quietly to visit the houses and gardens of the area.

Late in the afternoon, events tapered off in preparation for the evening. "Pier" Davis, our thoughtful and solicitous host of the afternoon, paused at his very attractive home where he dispensed long cool drinks in a charming garden. Driving us back to the Ambassador, he joined in our rooms for a continuation of this ritual. This all culminated in a very formidable "children's hour" on the Main Floor.

The Southern California Chapter extended its hospitality over a several-day period, which included numerous subjects of interest. Your humble servant drove with a local friend to San Diego the morning after the Annual Dinner, taking the delightful South Coast drive, lunching at Laguna and arriving at our destination about the middle of the afternoon. Visions of mile upon mile of aircraft manufacturing plants greet the eye, most of them of recent construction, and many in the process of building. Goodhue's lovely buildings in Balboa Park still have a vitality of their own, enhanced as they are by the attractive surroundings. Mr. Requa and other local architects have effectively preserved the established spirit in certain new buildings which have been added to the group.

One could hardly leave the West Coast without paying tribute to Santa Barbara, San Francisco, or Seattle. The Atlantic Seaboard takes its girdle of great cities for granted, but the "visiting firemen" from the East are bound to be excited by the extent and variety of the "Coast," and its formidable communities. Santa Barbara with her shoulders resting against the mountains and her feet bathed by the Pacific justifies the beautiful homes and gardens which have been developed there. "Shades" of George Washington Smith, Reginald Johnson, Bertram Grosvenor Goodhue were revealed to our enthused gaze by our gracious hosts of the Santa Barbara Chapter.

San Francisco! The exclamation point has not been misplaced. Here indeed is a town where the ingredients of both Nature and man have combined to produce an American answer to those other great ports of the world: Naples, Rio, and Sydney. Her interest and charm should not rest alone with the great Bay spanned by the two breath-taking bridges, nor with her surrounding hills covered with skyscrapers and villas; neither does her intriguing Chinatown, her provocative night-life, or her cosmopolitan waterfront dominate; it is rather the compelling composite which creates such an indelible impression.

* * * *

It is a pity that in twenty-one days out of Cleveland, one cannot visit all of the interesting spots either en route or when actually on the West Coast; perhaps since a chronological factor must be invoked, it is pathetic that there are not forty-eight instead of twenty-four hours in the day. Be that as it may, the "California Cruise" had to end somewhere and Frank Crutsinger of the USHA and Jim Rose of Los Angeles saw a very dejected delegate take his leave at the Oakland ferry on the evening of Monday, May 26th.

PENCIL POINTS DATA SHEETS

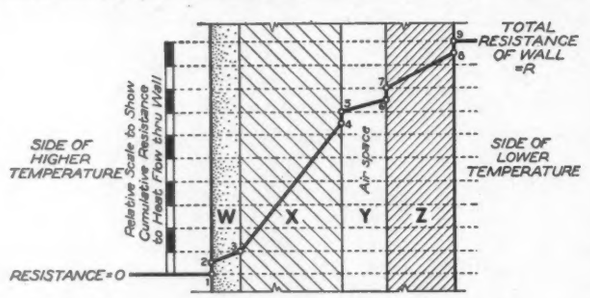
Prepared by DON GRAF, B.S., M.Arch.

PENCIL POINTS DATA SHEETS

HOW TO FIGURE HEAT LOSS COEFFICIENTS (1)

Index No.
E 2 t
MECHANICAL

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF



The heat loss thru a wall, floor or roof depends upon the over-all resistance of the construction to heat flow.

In the drawing above is shown graphically how the over-all resistance of a heterogeneous wall is made up of the numerical sum of the resistances of the various parts. The total resistance to heat flow increases as we proceed thru the wall from the side of higher temperature toward the side of lower temperature. There are 4 types of resistance which may go to make up the total over-all resistance **(R)** of a given wall.

F = The surface or film resistances.

M = The resistances of the solid materials.

A = The resistance of the air space, or spaces.

I = Resistance of insulating materials.

F = FILM RESISTANCE. The surface of a material exposed to air offers a resistance to heat flow which is called the film resistance and is indicated here by the letter F, with a subscript for identification in case there are several. In the illustration, F_{1-2} is the film resistance of the wall face on the side of higher temperature. F_{4-5} and F_{6-7} are the film resistances of the surfaces facing the air space. F_{8-9} is the resistance of the surface on the side of lower temperature.

In still air the film resistance of a vertical surface, such as the interior plastered wall of a house, would have a value of 0.66. The exterior film would be different since these are usually determined experimentally upon the assumption of an air movement of 15 miles per hour. The sum of F_{1-2} plus F_{4-5} plus F_{6-7} plus F_{8-9} can be indicated by the symbol ΣF.

Where 2 different materials are in contact as at 3, there is no film resistance.

The film resistance of a horizontal surface will be different than that for the same material in a vertical position and the direction of the heat flow also affects the resistance value. The following table presents typical resistance values for various types of surfaces.

Ordinary Surfaces	*Values of F*
Vertical surfaces, still air, heat flow horizontal	0.66
Horizontal surfaces, still air, heat flow upward	0.51
Horizontal surfaces, still air, heat flow downward	0.83
Outside vertical surfaces, air 15 mph	0.17

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HOW TO FIGURE HEAT LOSS COEFFICIENTS (2)

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M = RESISTANCE OF SOLID MATERIALS. Different materials used for wall construction have different resistances. Material W in the illustration, for instance, might have considerably less resistance than material X. The resistance of the body of a material is indicated by the letter M with a subscript for identification where several materials are used.

In the illustration, the resistance of material W is shown by the line 2-3 and the vertical distance would indicate the amount of the resistance. The sum of Mw plus Mx plus Mz can be indicated by the symbol ΣM. The following table presents typical resistance values for various types of materials.

The resistance of *heterogeneous* materials, such as hollow tile or plasterboard made of gypsum between layers of heavy paper, do not vary directly as the thickness—and values for each thickness have to be determined experimentally. However, when the resistance of a *homogeneous* material for 1″ thickness is known, the resistance for other thicknesses are found by direct proportion, i.e., 2″ thickness has twice the resistance of a 1″ thickness.

Type of Material	*Thickness*	*Values of M*
Average Brickwork	1″	0.15
"	4″	0.60
"	8″	1.20
"	12″	1.80
Typical Stone Masonry or Concrete Work	1″	0.08
"	4″	0.32
"	8″	0.64
"	12″	0.96
"	16″	1.28
Hollow Clay Tile Masonry	4″	1.00
"	6″	1.60
"	8″	1.70
"	12″	2.50
Gypsum, Solid	1″	0.50
Sand and Gravel Hollow Core Concrete Blocks	12″	1.30
Cinder Hollow Core Concrete Blocks	1″	1.75
Gypsum between Layers of Heavy Paper	3/8″	0.26
"	1/2″	0.35
"	1″	0.70
Cement and Asbestos Building Board	1″	0.37
Cement Plaster (Stucco)	1″	0.08
Metal Lath and Gypsum Plaster	25/32″	0.23
Wood Lath and Gypsum Plaster	25/32″	0.40
Fir Sheathing and Building Paper	25/32″	1.16
Fir Sheathing, Building Paper and Yellow Pine Siding		2.00
Fir Sheathing, Building Paper and Stucco		1.22
Maple Flooring	25/32″	0.65
"	1″	0.83
Battleship Linoleum	1/4″	0.74
Cement and Asbestos Building Boards	1″	0.37
Asphalt Roofing		0.15
Tile or Terrazzo Flooring	1″	0.08

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PENCIL POINTS DATA SHEETS

HOW TO FIGURE HEAT LOSS COEFFICIENTS (3)

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A = AIR SPACE RESISTANCE. Heat is conducted across an air space by a combination of radiation, conduction and convection. The resistance of an air space increases with the air space width until about ¾" has been reached—after which the width has but little effect.

In the illustration the resistance of air space Y is shown by the line 5-6 and the vertical distance indicates the air space resistance which can be identified by the symbol A_Y. In a wall having several air spaces their total resistance can be identified by the symbol ΣA. Air spaces bounded by very smooth reflective or rough surfaces vary somewhat from the resistance of air spaces bounded by such ordinary materials as paper, wood, plaster, etc. The following table gives typical resistance values for spaces bounded by ordinary materials and will serve as approximations which are accurate enough for usual calculations.

Type of Air Space	*Width of Air Space*	*Values of A*
Vertical space, heat flow horizontal	¾"	0.90
Joist space, horizontal, heat flow upward	3½"	0.75
Stud space, vertical, heat flow horizontal	3½"	0.85
Joist space, horizontal, heat flow downward	3½"	1.05

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I = RESISTANCE OF INSULATION. Resistance values per inch of thickness do not afford a true basis for comparison between insulating materials as applied altho they are frequently used for that purpose. The value of an insulating material is measured in terms of its heat resistance which depends not only upon the resistance per inch but upon the thickness as installed and the presence of air spaces which produce film resistances. In the illustration no insulation material is shown. The symbol I is used to designate the resistance of an insulation material, and in the case of several occurring in the same construction, the symbol ΣI would be employed. The following table gives typical resistance values for I.

Type of Insulation	*Thickness*	*Values of I*
Typical flexible blankets	1"	3.70
Blanket of wood fibers between layers of paper	1"	4.00
Hair felt blanket between layers of paper	1"	4.00
Glass wool, loose fill or bat	1"	3.70
"	2"	7.40
"	3½"	13.45
Loose cellular dry gypsum	1"	1.00
Typical mineral wool, loose fill or bat	1"	3.70
Loose sawdust and shavings	1"	2.44
Typical rigid cork board	1"	3.33
"	1½"	5.00
Typical rigid fiber board	1"	3.03

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HOW TO FIGURE HEAT LOSS COEFFICIENTS (4)

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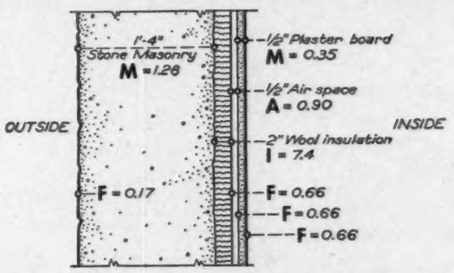
PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF



TYPICAL EXAMPLE. In the illustration is shown a 16" masonry wall with 2" of wool insulation, an air space and ½" plaster board. It is desired to find the heat loss coefficient for this construction.

From our original statement we find that:

$$\text{Total resistance (R)} = \Sigma F + \Sigma M + \Sigma A + \Sigma I$$

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An examination of the drawing shows 3 film resistances (F) in still air. Consulting the foregoing tables, the value is 0.66. The outside film resistance is 0.17.

$$\Sigma F = 0.66 + 0.66 + 0.66 + 0.17 = 2.15$$

The resistance of the masonry and the ½" plaster board are found from the foregoing tables and we have:

$$\Sigma M = 1.28 + 0.38 = 1.66$$

In a similar manner we have the resistance of the air space:

$$\Sigma A = 0.90$$

In a similar manner we find:

$$\Sigma I = 7.4$$

The total overall resistance of the wall becomes:

$$R = 2.15 + 1.66 + 0.90 + 7.4 = 12.31$$

TRANSMISSION COEFFICIENT. The transmission of a square foot of construction is equal to the reciprocal of the resistance—which is a fancy way of saying:

$$U = \frac{1}{R}, \text{ or}$$

$$U = \frac{1}{12.31} = 0.081$$

This means that each square foot of the wall construction will transmit 81-thousandths of a Btu per hour per degree difference in temperature between the inside and outside of the construction.

IMPLICATIONS OF A. R. P.

BY SERGE CHERMAYEFF, F.R.I.B.A.

EDITOR'S NOTE—This is the beginning of a series of new discussions by a distinguished British architect (now residing in San Francisco) in which he will attempt to clarify the matter of Air Raid Precautions, commonly known as A.R.P. (In our issue of November, 1940, Mr. Chermayeff outlined a suggested program for architects who were beginning to be concerned about A.R.P. and this outline furnished the point of departure for the activities of several defense committees subsequently organized.) Even in Europe, where the problem of defending populations against air attack has been studied during years of anticipation and more recently under actual war conditions, there is still some room for the improvement of techniques and organization. Over here, where we are still incompletely conscious of the threat, there is every reason to be informing ourselves of the experiences of foreign cities and devising, if possible, better means of handling the modern emergency of air warfare. Mr. Chermayeff, in London, watched the various phases of preliminary fumbling by government with the imperfectly understood problem and the struggles of technical planners, including himself, to develop and secure the adoption of a rational program. He is therefore in a position to tell us how to be sanely expeditious in doing our own job.

History repeats itself with minor variations. Since first writing on A.R.P. last fall for the November issue of PENCIL POINTS certain events which one can recognize have followed a familiar sequence. Architects and engineers here in the U. S., as their colleagues in Europe before them, have reacted inevitably to the approaching storm. A genuine desire to serve their country's needs as well as an equally genuine desire to survive as individuals has inevitably led them to regard building for war, "defense building," as the only alternative to the rapidly receding private "peace" practice for exercising their professional skill.

LONG RANGE ASPECTS

For the most part, all that has been written in the architectural and technical press appears to have accepted a defense activity as something quite separate from a peace activity, and most of the authors on the subject have plunged into technical detail of bomb-proof shelters and have dwelt little, if at all, on the possibility of combining the immediate purposes of defense with the long term "peace" use of A.R.P. as a whole. I hope to deal with this aspect of A.R.P. in later articles. The purpose here is to evaluate what has been done so far by independent technicians.

Because solutions in detail can only follow reasonably after statement of principle has been made and an organization for carrying this principle into action has been established, the most important contribution made so far has been that of the Boston group of architects.

MERIT OF BOSTON PLAN

Their plan, from the moment of its inception, establishes an organizational link between the Federal Government in Washington, local interests and Government departments of State, County and Municipality, and the professional group, in this case the A.I.A. Their action implies the recognition that A.R.P. involves the broadest patterns. The preliminary plan of Boston makes it clear that three major representative groups are involved, the People, the Government, the Technicians. Their plan as a whole, therefore, may well serve as a model for others to follow: that is, a program of genuine objective research into the problem here in the U. S. and not the blind acceptance of specific remedies offered for other ills in other places and under different conditions of war.

The work undertaken in connection with detail rather than matters of principle by the Pratt Institute, New York, into "defense design" and by the American engineering societies who at this moment have representatives making field observations in England will prove its value in later stages. Whatever the relative merits of these different actions may be, enough has been written and done to suggest that the initiative is in the hands of the technicians. It is important that they should not lose this initiative. The moment has come, however, when something must be heard from the others involved.

WE CAN PROFIT BY ENGLAND'S EXPERIENCE

In certain particulars the U. S. may be spared the repetition of undesirable events in England. The U. S. has so far been spared a Government soporific which chose inexplicably, as its first subject matter, protection against the least likely form of attack: gas, while completely neglecting evidence and technical advice on fire and explosives. No doubt, some private shelters complete with cocktail bars and air-conditioning have been erected here at great cost for some obscure purpose of millionaires "a la mode." But at least the public at large has so far been spared hire purchase plans for acquiring patent shelters professing immunity from all attack of man or devil.

PROBLEM MUST BE STATED

The spread of "patent medicine peddlers" can therefore be prevented here if the work to date of the tech-

nicians is carried to its logical conclusion. This can only happen if the other protagonists enter now. No technical solution can be offered, however much good will and knowledge specialists such as architects and engineers may possess, *unless the problem is clearly stated.* Planners, architects, engineers cannot do this alone. They can assist in clarifying the problem through their objectivity and intelligence. Through their continued organized effort they can stimulate an increased interest and understanding of A.R.P. Finally they can put it into its physical form. But that is all they can do.

In a democratic society it is as important to stimulate intelligent interest in A.R.P. among the people whose survival or obliteration will depend on the efficacy of this, as it is to supply a number of skilled technicians on whom the Government may draw. Without a sufficient and intelligent interest on the part of the people as a whole the actual execution will be heavily handicapped, if not completely ineffectual.

For this reason it seems essential that the issues of A.R.P. as understood by the technicians, are not confined any longer to the technical press with its limited influence but are made known through every possible channel which can reach the public.

FEDERAL GOVERNMENT ALONE CAN CLARIFY

An authoritative answer to the question of what A.R.P., for whom, against whom, should be made without delay: the problem must be stated. The Federal Government alone can do this and should make such a statement without ambiguity. Such a statement would remove the unknown quantities which hamper further progress: who the enemy is, the probable places from which he will attack, the approximate areas in this country which will be involved in such an attack, and the degree of protection the Government deems to be effective, and how far it is prepared to go to see that this protection is supplied. To sum up, until the Government has made some statement on strategy and policy, architects and engineers cannot usefully do more than confine themselves to tasks of organization and theoretical research in preparation for the day when fuller knowledge will make further action possible.

An official statement of this kind will necessarily be a compromise between strategic policy issues and the need to prevent hysteria, misguided action, and exploitation—which all involve wastage of effort, time and money in the first place, and life in the second—if war becomes an actuality. In spite of this, I still believe that such a declaration from the Government is the next indispensable step towards A.R.P. Whatever the technicians undertake can only be effective if it has the full approval of the Government and its financial support and necessary legislation.

MANY FACTORS INVOLVED

In November I endeavored to make the point that defense planning is essentially a problem of organic unity, of which A.R.P. is an integral part. At the cost of repeating myself, I want to stress again the interdependence of apparently unrelated factors. Without the knowledge of the problem of strategy and policy as a whole, no A.R.P. plan can be intelligently evolved for a given area or even the design of an individual shelter.

Let us take a hypothetical situation of a city in a vulnerable area which will be required to provide A.R.P. for its citizens. Without some knowledge of the distance of the bases from which the attack will be made, one cannot proceed. Flying distance determines warning period. This in its turn suggests the distribution and numbers of shelters. Other things being equal, the logical conclusion in the case of a minimum warning period would express itself in a maximum number and a maximum distribution of shelters to make these most readily accessible. The reverse would obviously be the case if the base of the attack were distant. All things are not equal however. Minimal warning period implies a convenient enemy base which in its turn suggests continuous or frequent attacks. In this case shelters would be occupied for prolonged periods. In view of the fact that there seems no completely effective defense against night raiders, night raids will obviously be resorted to, and to obtain even partial rest people would probably have to sleep in shelters. Such conditions would immediately demand equipment of shelters which it would be impossible to provide on grounds of economy alone in anything but very large shelter units. The degree of protection and immunity per head which it is possible to provide for a given sum of money increases in direct proportion to the size of shelter.

The hypothetical situation cited above contains a paradox. The same set of factors on the one hand seem to demand a large number of small shelters, on the other fewer and larger shelters. The point is that aside from logic and technical knowledge two unknowns are involved, the degree of protection and amenity to be provided —as well as the amount of money available to meet this demand.

HOW FAR MUST WE GO?

The definition of these unknowns is therefore of the most vital importance. Without this A.R.P. can have no meaning. We have heard too much and too often about the English official theory of dispersal. This has always been presented in a detached abstract way. However, as Professor Haldane has repeatedly pointed out, mathematically such a theory has no validity. On the other hand too little has been said concretely about what happens. Anyone killed as a result of air attack is very dead, whether death is caused by mental shock, exposure, fall of debris, as a result of wounds received from splinter of bomb, shell or machine gun bullet, as the result of gas, slow death by burning, or sudden death by direct hit.

A.R.P. which does not give the maximum possible protection to the maximum number of people would be an admission of failure to profit by experience. It is not therefore irrelevant for the technicians at this stage to ask for information on principle. Without it, nothing very useful can be designed in detail.

SUMMARY

To sum up, technicians have taken the initiative in creating an interest in a vital aspect of defense planning. They have further created a nucleus of organization. To translate this initiative into action they must now know the Government's intentions. They are in the position to assist and accelerate Government action and can assist the tasks of both the Government and their own groups by continued development of a philosophy of A.R.P., technical study and organization, and by bringing the issues before the public. Good A.R.P. can only be provided by widespread cooperation. Architects and engineers by themselves are not enough.

MONTHLY WASHINGTON REPORT

COMPILED BY A. D. TAYLOR OF CLEVELAND

The following information is prepared each month as a result of observation of activities in the different Government agencies engaged in National Defense. The Editors welcome comments and suggestions from readers as to the kind and extent of information which may be of the maximum interest to members of the technical planning professions and to the building industry for whose benefit these monthly reports are published.

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GENERAL PROGRESS

With the increase in the number of defense projects for the Army and for the Navy, as well as industrial plants under Government and private ownership, the demand for additional housing is rapidly growing. This housing will be developed through government agencies and also through private capital.

The Reconstruction Finance Corporation is taking a more important part in the program of providing industrial plants to be operated by private companies and also in connection with the development of new ordnance projects, many of which will, as reported, be constructed under the direction of the Reconstruction Finance Corporation through the Defense Plants Corporation.

It is quite likely that a strong effort will be made to place under contract with architects-engineers a number of projects which to date have been under consideration but which have not to the date of this report been released for actual planning procedures.

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DEFENSE HOUSING

Increased amounts of money are being made available for defense housing, the major part of the funds for which are allocated to the Federal Works Agency, to the Public Buildings Administration, the United States Housing Authority, the Farm Security Administration, and to special groups within the Federal Works Agency and under the direction of Col. Westbrook and of Dr. Foreman. Some special projects have been handled directly under the Federal Works Administrator, Mr. Carmody, through his assistant Col. Westbrook. The other division of defense housing in the Federal Works Administrator's office has to date handled approximately 12,000 units (8,000 of which represent permanent housing and 4,000 of which represent temporary housing). Architects and representatives of other technical professions have been employed on these projects being done direct through the Federal Works Administrator's office.

The Farm Security Administration is taking a large amount of responsibility for temporary housing which is of the prefabricated and demountable types. This housing is in connection with military reservations and in connection with industrial plants where a portion of the housing is distinctly temporary in character.

A new program of housing through the United States Housing Authority will be released before this report is printed. The amount of housing being done through the United States Housing Authority, as Defense Housing, has been steadily increasing. Information can be procured concerning these lists of projects by referring to the releases and magazines which are published through the government agencies heretofore referred to in other issues of these reports.

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PENDING LEGISLATION

Senate Bill 1580. This bill on which hearings have been held before the Senate Committee on "Post Offices and Post Roads" was reported out from this committee on June 10 (Report Number 416). It authorizes appropriations to be expended during the emergency on roads for National Defense and for other purposes. The maximum appropriation under the bill in its present form approximates $250,000,000. These funds are to be expended for the purpose of correcting and improving the conditions in the main lines of the strategic highways, to provide adequate and proper access to defense military sites and other establishments, and to provide new highways where existing highways have been cut off because of military developments. Under this bill "flight" strips may be developed along public highways for emergency use of planes when required.

Funds from this bill may also be used to make necessary advance engineering studies, surveys, plans and to develop programs for this part of the defense work. This bill is also before the House of Representatives as Bill Number H. R. 4935 and hearings have been held before the House Committee on Roads. Copies of these and other bills may be procured from the Clerk's office in the Senate and the House of Representatives.

Senate Bill Number 1617, sometimes known as the Revolving Fund Bill, was referred to the Senate Committee on "Education and Labor" on June 13, 1941. This is a bill to amend the Employment Stabilization Act of 1931 and was introduced in the Senate on June 10, 1941.

This bill is an authorization for appropriations to be allotted to states and political subdivisions thereof for examinations, surveys, legal studies, studies of physical planning problems and of financing for proposed public improvements which will be desirable and necessary after the present emergency.

Under the terms of this legislation desirable opportunities for employment of those persons now engaged by public agencies (federal, state, county and municipal) should be greatly increased.

Community Facilities Bill H. R. 4545. This bill, to which reference has been made in past issues of this magazine, has not to the date of this report been passed by the Senate. Hearings were held before the Senate Committee on "Public Buildings and Grounds," on May 19 and 20. Copies of the report of these hearings are available through the office of the Clerk of the Senate.

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CANTONMENTS, AND ORDNANCE PROJECTS

To the date of this report nine cantonment projects have been announced and architects-engineers have been employed to prepare the necessary plans and specifications for these projects, as referred to in the June issue of this magazine.

Published reports indicate that the number of such projects (including cantonments and ordnance projects) may be greatly increased. As and when these projects are finally approved by the War Department, announcement will be made through the regular channels in which such information is released.

In the beginning of the defense program the Quartermaster General's Office had the responsibility for the planning and development of cantonments, ordnance plants, and army air fields. At the present time the preliminary plans for the army air fields are developed by the Air Corps, and the detailed and final plans are prepared by the Corps of Engineers who supervises the construction.

At the time of preparing this report the ordnance projects, for the construction of which Reconstruction Finance Funds are used, had been transferred to the RFC. About June 21, however, the responsibility for administering the program of construction on these ordnance projects was again placed in the Office of the Quartermaster General through the Construction Division.

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AIR CORPS ACTIVITIES

There will be increased opportunities for those who are interested in the construction program, in connection with the army air fields, the number of which will be increased to meet the proposed expansion in the Air Corps activities.

In this work there is more opportunity for the employment of engineering ability than of architectural ability because of the standardized plans and layout which are adopted in the development of these fields.

The housing requirements in connection with the new air fields are being handled largely through the housing agencies and not directly through the Air Corps.

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POST-WAR REBUILDING OF BLIGHTED AREAS

Much has been written and said concerning the extensive program in connection with the rebuilding of blighted areas in many of the larger centers of population, after the present emergency is over and as a part of the great Public Works Program. There seems to be little question concerning the intent of government agencies to take an important part in this rehabilitation program. This work will probably be on a large scale and the preliminary preparation in developing plans and solving many other technical problems preparatory to any actual work should provide much opportunity for the members of the technical planning professions.

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ADEQUATE FEES FOR TECHNICAL SERVICES

The question of determining ample fees for the services of representatives of the technical planning professions engaged in Defense Housing has not been finally settled. This important question merits further consideration and in all probability a further meeting between representatives of the professions and representatives of the government agencies engaged in Defense Housing, will be held for the purpose of arriving at a mutually acceptable understanding as to the amount of fees to be paid for such services.

June 11, 1941

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MAJOR DEFENSE PROJECTS UNDER THE CONSTRUCTION DIVISION OF THE QUARTERMASTER GENERAL'S OFFICE.

It is generally understood that in the Army Expansion Program there will be a number of additional cantonments including Triangular Divisions and Armored Divisions.

To the date of this report nine of these projects have been announced as follows:

Location of Projects	*Architect-Engineer*
Blackstone, Va. (Triangular Division)	Wiley & Wilson Lynchburg, Va.
Augusta, Ga. (Triangular Division)	J. V. McCrary Atlanta, Ga.
Neosho, Mo. (Triangular Division)	Burns & McDonnell Kansas City, Mo.
Fort Smith, Ark. (Triangular Division)	Black & Veach Kansas City, Mo.
Cookson Hills, Oklahoma (Triangular Division)	Holway Engineering Co. Tulsa, Oklahoma
Lompoc, Cal. (Combined Armored and Triangular Division)	Leeds, Hill, Barnard & Jewett Los Angeles, California
Eugene, Oregon (Triangular Division)	John W. Cunningham Portland, Oregon
Medford, Oregon (Triangular Division)	Hunt & Chambers Los Angeles, California
Columbus, Indiana (Triangular Division)	Charles H. Hurd Indianapolis, Ind.

PUBLIC RELATIONS

A SECTION EDITED BY D. KNICKERBACKER BOYD

The assembly of architects in California is now history. Members of Chapters and of State Associations have now gone back home or to work. While they were away, some of us in the East looked in the newspapers for accounts of important matters discussed or forward actions taken. We were disappointed to see on different days repetitions of a nature which are always more apt to make news because they seem to portend disaster rather than constructive accomplishments.

"Says Architects Are Losing Status" was a heading in the *New York Times*, on May 18th. In the same issue was printed a doleful statement attributed to Dean Bossange, on the closing of the Architectural School in the New York University:

> "We must admit the profession has slipped badly since engineers were allowed to file drawings. Further, much work is now done under government control, many corporations have an architectural department in their organization and in the last year 'designers' and decorators have become aggressive competitors, so the prestige of the profession has suffered."

This Editor has attempted to prove in the last five issues of this Section, by the words and wise counsel of others, that if we architects begin now to do what we should have done years ago in establishing ourselves in public esteem, we can yet make rapid progress. We cannot do it, however, by blatant self-criticism and abnegation and bemoaning of our status. This Section refuses to "enjoy poor health" or to join the group gathered around the wailing post.

Those returning from the Convention bring back grand stories of the trip, the magnificent scenery, the comradeship, and the unparalleled hospitality of the Californians. They also say there was evidence on all sides of an ever-growing consciousness of the need for public service by the architect and the earning of greater recognition of the profession by that public which knows so little about the architect. That mass of people must surely henceforth become better-informed about the value of competent services. We print on this page comments appropriate to this declaration—one by a past President of a State Association, another by one just elected to the Board of Directors of the Institute itself. Congratulations, Mr. Fletcher. As to Public Relations discussions at the Convention, Editor Kenneth Reid has kindly consented to report briefly for amplification later.

D. KNICKERBACKER BOYD
4 South 15th Street, Philadelphia, Pa.

"The public in general wants to know and must be better informed regarding the nature, extent, and value of the architect's services. In conference with a small group a short time ago, I was asked the question: Just what does an architect do besides making a building good-looking? Having lately read an article published in the last issue of *The Florida Architect* entitled 'This Man the Architect,' by *Charles S. Symonds*, Architect, I gave to this group a sketchy outline of the article and to the most interested ones I submitted a copy for them to read. The reaction of these men to this article makes it clear to me that we must find some way to convey to the public that too much emphasis has been laid on the *art* of architecture; and as a result, in this day of practical men, the architect has suffered by the public's blind conception of him as being solely the artist, endowed with the limited ability to make things pretty."

HENRY Y. SHAUB, Lancaster;
Former President, *Pennsylvania Association of Architects*

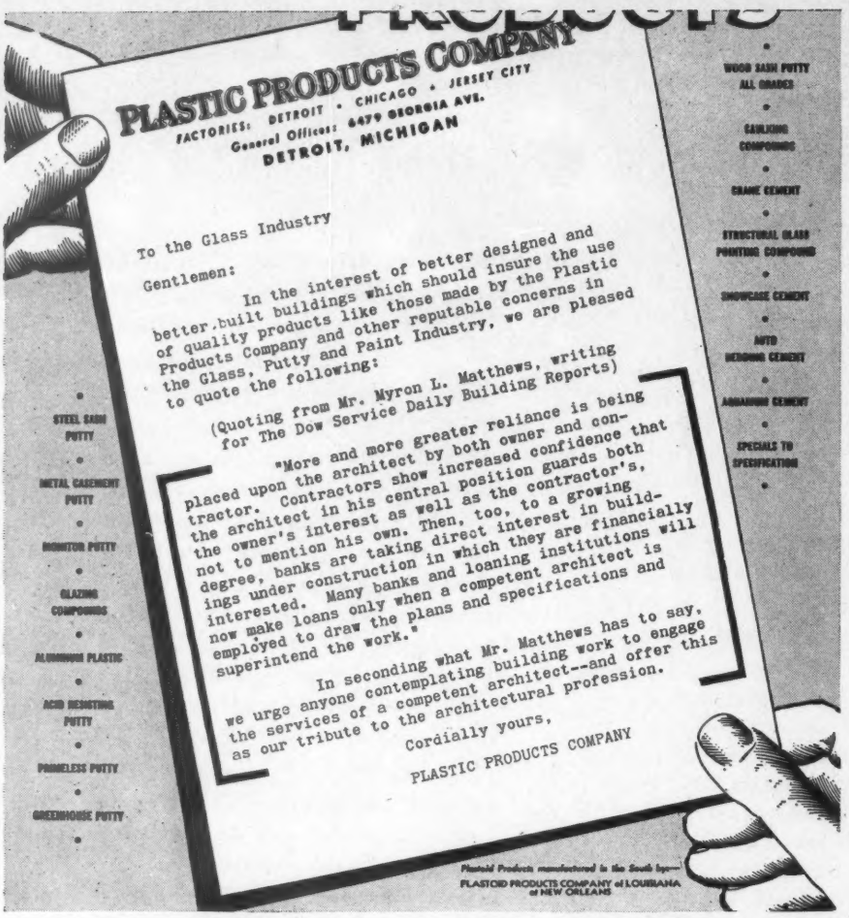
During the years that I have been contacting the various Chapters and State Associations, I have received data and information that suggest a number of thoughts concerning public relations. Of these, I am taking the liberty of recommending one in particular to your attention. It refers to the question, "just what is an architect?" Some of the answers have been so inadequate or obscure that I have become obsessed with the idea that an answer to this very pertinent question should be formulated, adopted by The Institute and the profession generally, used in public relations and held up to our young men as defining the role for which they should qualify as practicing architects.

FREDERICK A. FLETCHER,
Baltimore, Md.

(EDITOR'S NOTE: *We will soon follow this suggestion—and start a discussion. In going before the public we should surely be in agreement as to the article we are urging them to use. Let's work it out and stand with a united front.)*

Public Relations proved to be one of the livest topics considered at the recent convention in Yosemite Valley. One regular round table session and one special session of a selected group each devoted several hours to serious discussion of the problem facing the profession and of ways and means of developing a program and a campaign. Members exchanged information as to the experience of local public information committees and it was voted to make Talmadge Hughes of Detroit, who is the A.I.A. Public Information Chairman, the central officer through whom a full national program shall be worked out this year to be presented to the Board of Directors for approval and action at the next convention.

All individual architects who are really interested in Public Relations activities are urged to write Mr. Hughes at 120 Madison Avenue, Detroit, and to give him all practical suggestions that would fit into an all-out campaign. The group backing this movement really means business and deserves your active help. K. R.


PLASTIC PRODUCTS COMPANY
FACTORIES: DETROIT • CHICAGO • JERSEY CITY
General Offices: 6479 GEORGIA AVE.
DETROIT, MICHIGAN
To the Glass Industry
Gentlemen:
In the interest of better designed and better-built buildings which should insure the use of quality products like those made by the Plastic Products Company and other reputable concerns in the Glass, Putty and Paint Industry, we are pleased to quote the following:
(Quoting from Mr. Myron L. Matthews, writing for The Dow Service Daily Building Reports)
"More and more greater reliance is being placed upon the architect by both owner and contractor. Contractors show increased confidence that the architect in his central position guards both the owner's interest as well as the contractor's, not to mention his own. Then, too, to a growing degree, banks are taking direct interest in buildings under construction in which they are financially interested. Many banks and loaning institutions will now make loans only when a competent architect is employed to draw the plans and specifications and superintend the work."
In seconding what Mr. Matthews has to say, we urge anyone contemplating building work to engage the services of a competent architect--and offer this as our tribute to the architectural profession.
Cordially yours,
PLASTIC PRODUCTS COMPANY
STEEL SASH PUTTY
METAL CASEMENT PUTTY
MONITOR PUTTY
GLAZING COMPOUNDS
ALUMINUM PLASTIC
ACID RESISTING PUTTY
PRIMELESS PUTTY
GREENHOUSE PUTTY
WOOD SASH PUTTY ALL GRADES
CAULKING COMPOUNDS
CRANE CEMENT
STRUCTURAL GLASS POINTING COMPOUND
SHOWCASE CEMENT
AUTO BEDDING CEMENT
ASBESTINE CEMENT
SPECIALS TO SPECIFICATION
Plastoid Products manufactured in the South by—
PLASTOID PRODUCTS COMPANY of LOUISIANA at NEW ORLEANS

HELP BY MATERIAL MEN

(3) The accompanying illustration of an advertisement on the back cover of a trade publication ("Glass Digest") in which is a quotation from the article by Myron L. Matthews affords an interesting story.

Out of a clear sky came to this writer the letter which follows:

PLASTIC PRODUCTS COMPANY
General Offices, Detroit
May 15, 1939

Dear Mr. Boyd:

Our Mr. Wood spoke to the writer about the very nice time he had with you when he was last in Philadelphia. I would like to thank you for the courtesy shown him.

Mr. Wood also spoke about giving the architects a little publicity when we had the opportunity. It so happens that we have the back cover of the "Glass Digest" magazine published principally to glass jobbers open for the month of June. We also have a cut which is a duplication of our letter-head and would like to write a letter asking everyone concerned to consult an architect, see your architect or some such slogan.

Would you be kind enough to give us your ideas as to just what we should put in there so as to help the architect? Understand, this magazine does not go directly to people who are going to build although it does have quite a wide circulation and is read by a great many people. Possibly we could ask the glass people if they would use a slogan on their advertising.

If you have any ideas along this line, that you would like to have us incorporate in this, they would be certainly most welcome. The writer wants to get this out so it will appeal to people and will show the architects we are trying to cooperate.

Our copy must be in by the 25th of May so if you could get it to us say around the 20th, it would be appreciated. Again thanking you and trusting that the writer may have the privilege of meeting you personally some day, we remain

PLASTIC PRODUCTS COMPANY
(Signed) A. D. Covert,
President.

While the advertisement gives its own answer to this letter it was a pleasure to receive a reply from Mr. Covert containing this paragraph:

"Thanks a lot for helping us out. We trust it will accomplish something for the architects as well as ourselves. It was very kind of you to help us."

(4) Another gratifying example of cooperation through response to a suggestion is here offered. These cases are presented only to show what can be accomplished by any individual architect who will take an active part in such matters, without any thought of compensation other than the appreciation of co-workers and the gratification at having suggestions acknowledged and courtesies reciprocated.

OTIS ELEVATOR COMPANY
Philadelphia Office
February 27, 1935

Dear Mr. Boyd:

You will remember at a special meeting called by you and attended by our Mr. Sullivan and the writer, you mentioned the desirability of the larger companies advertising in national publications suggesting that architects should be consulted on building modernization, etc.

We are pleased to advise you that as a result of this conversation we discussed the matter with our Advertising Department and we are enclosing a sample advertisement, which we hope will please you and conform with your ideas along these lines. This advertisement appeared in the February issue of "Fortune," the February 16th issue of "Business Week," and the February 11th issue of "Time."

It is also the writer's intention to discuss this matter further with the members of the Producers Council locally, many of whom represent companies who do national advertising, with the hope that we may be able to have other national organizations follow suit.

OTIS ELEVATOR COMPANY
(Signed) H. Welden
For Manager.

This is what appeared in a "box" inserted in the advertisement cited:

> CONSULT YOUR ARCHITECT
>
> A relatively small expenditure on building modernization is solving the tenantry problem for many building owners. Your architect can show you how a modernization appropriation can be used to advantage.

EXHIBITS & EXHIBITIONS

(5) *Exhibits of Building Materials.* This subject is timely and a lively one for discussion. On the occasion of other exhibits such as those of Architecture or Allied Arts, or at certain meetings, there may often be opportunities when an exhibition of building materials and devices—especially those relating to homes and housing developments—might readily be arranged. Properly conducted and without undue emphasis on the practical side, they could increase the value and interest of a whole exhibit, at the same time becoming an added source of information to the public.

The subject of "Standards for Exhibits at State Meetings" was on the program for discussion on May 7th at the Chicago Session of the Producer's Council en route to the Institute Convention. This subject would seem to offer possibilities for cooperation with State and even local groups, in Exhibition matters. Such exhibits have already been held. With the cooperation of the Institute, the State Associations, local groups and the Producer's Council, PENCIL POINTS will compile as comprehensive a list as possible, of all Architectural, Allied Arts, Building Materials and similar exhibits held in recent years. This Editor will gladly furnish information about previous exhibits.

RADIO

(11) *Woman's Page of the Air*

Each weekday morning at 8:45, E.S.T., the Columbia Broadcasting System presents a 15-minute program with the title just given. It is edited and narrated by Adelaide Hawley, Woman's Page Editor of the M.G.M. Newsreel as "The News of the Day."

Recently Elisabeth Coit, New York Architect, was the Guest Speaker and was introduced thus:

"Our guest this morning is a registered architect, a graduate of the Massachusetts Institute of Technology, and her practical experience of many years has taken her among other things into the building of country houses, remodelling cooperative cafeterias and designing industrial interiors in New York City; she is a member of the Old Housing Committee (of the Citizens' Housing Council) of New York, and of the American Institute of Architects."

Miss Coit made some excellent suggestions tending to bring out facts about how the majority of folks live so that architects, city-planners and other technicians may the more acceptably provide for meeting the needs of the average home owner or tenant. These questions and answers were a part of the broadcast:

Q. "Do you think the things required of a house vary from generation to generation, Miss Coit, or not?"

A. "I think they do—very much so—and yet we go on building with the same general layout which has been used for years. Take for example the country farmhouse, where one of the good sized spaces was a woodshed, and compare that with the space needed for an oil tank now so common for fuel storage. Or the play room or game room—sometimes we call it the rumpus room—a space quite different from the old-fashioned parlor, always on its best behavior. But this does not mean that the spaces in the old farmhouse may not be modified to suit modern living needs. One of the best houses I have seen recently within a modern development was an old house brought up to date. Its planning was excellent from the point of view of local breezes and privacy—much better even than the new houses."

Q. "In other words, one of the chief problems of housing is to make it function according to the needs of modern living. How do architects and builders know what those needs are?"

A. "There is quite a bit of guess-work—I wish that defense building might be a sort of laboratory where we could find out just what house dwellers like and dislike."

Q. "How would you propose to find out—by door to door canvassing?"

A. "That would be the ideal way—if the General Federation of Women's Clubs would include it on their study programs and send out questionnaires to various localities and ask local members to get answers to the questions. Then the questions could be sent, perhaps, to the American Institute of Architects and analyzed."

Q. "How would this material be utilized?"

A. "The Federal government; state and local health and educational groups would be interested; as well as builders, contractors, real estate dealers, and certainly architects would make use of this information."

Q. "Has such a survey ever been made?"

A. "The Oregon State College at Corvallis has published some good studies of the use of space in the home, based on questionnaires answered by farm and town dwellers. It was found, among other things, that the modern 'Streamlined' kitchen is not ideal—the 36-inch height suitable for washing dishes, etc., is too high for stirring and beating, which should be done on a shelf about 4" lower. Then another very fruitful questionnaire was published by the Women's City Club of New York, which tabulated the result of interviews of about 1,400 homemakers in old law tenements in the city. The object was to find out what the tenants liked—and did not like—in their apartments, and, interestingly enough, one of the things most longed for was toy cupboards—a wish which architects would be slow to appreciate if such a survey had not made it clear to them."

Q. "What sort of questions would be included in such a questionnaire?"

A. "Timetable questions:—questions about the use of storage spaces—about wall spaces for furniture requirements—in short, *how* the family lives in the house, and how it could be better served by different arrangements."

Q. "I should think it would be sort of fun for any woman—to sit down with a piece of paper and figure out how much space she is paying rent or taxes for which is used only occasionally."

A. "It would be fun, and rather surprising too. We are apt to take for granted the delinquencies of our house, and a survey of how we really use it would certainly give us many surprises. Architects want to plan houses or large-scale housing in such a way as to best solve the problem of how people live: and they must work from the data at hand. More information about how people live and want to live would bring about the model house to end all 'model houses.'"

BOOKS & PAMPHLETS

(6) *"The High Cost of Cheap Construction."*

Under this title the Weyerhaeuser Sales Company has been for many years publishing a book of valuable suggestions for eliminating faults frequently found in home construction. In the 1940 revised edition the foreword "How to Obtain a Substantial Home" appears this statement:

"No home can be thoroughly successful unless it combines four basic essentials: good design, efficient plan, right material and sound construction. A home may be large or small, elaborate or inexpensive. It may be attractively finished and it may boast of every modern convenience and labor-saving device, yet without all four of these essentials it can never be a permanent, substantial and satisfactory home.

"The purpose of this book is to treat in simple terms the construction principles and practices that will help to make your house a substantial home. It will show you the means of judging the construction of your home as it is being built; assist you in avoiding endless annoyances and excessive maintenance costs. To the home builder who retains the services of an architect, this book can offer little more than an appreciation for the value of his services. They insure correct design, carefully prepared specifications and intelligent supervision."

MISCELLANEOUS

(8) *FHA Suggests Employment of Architect.* In the opening address of Henry Y. Shaub, President, at the annual meeting in Hershey, Pa., on April 18th, of The Pennsylvania Association of Architects, he included this reference to a matter concerning public relations;

"A short time ago I read in the Philadelphia Inquirer the following paragraph:

" 'The employment of an architect to design a house is a sensible and economic step,' says an FHA statement. 'The architect can often make savings in construction costs, as well as in the use of space. Being acquainted with new materials, new methods of applying them, and new types of equipment, he can suit the house to the needs of the family.'

"This statement is good 'advertising' for the profession but got into the press through FHA's influence.

(9) *Release from Federal Home Loan Bank System*

In the newspapers of the country there recently appeared this statement covering architectural participation in the "Registered Home Service."

"With tens of thousands of new wage earners being added to the ranks of potential home owners through defense activities, and the normal demand for housing reaching a new peak, home seekers today were urged to insist upon three elements essential to the security of their investments—good design, quality materials and sound construction.

"These essentials can be assured most effectively through home building services such as an increasing number of institutions are offering throughout the country," declared James Twohy, governor of the Federal Home Loan Bank System. "These institutions, which have enlisted the cooperation of architects and technicians in the establishment of home building departments, have taken an important step in raising the standards of American dwellings."

"Twohy pointed out that the 12 regional banks of the Federal Home Loan Bank System now are making available the Registered Home Service, by means of which a mark of quality can be put on homes completed under its protective features.

"In this effort the Federal Home Loan Banks have the support of the American Institute of Architects and the Producers' Council, national association of quality building materials manufacturers," said Twohy. "The service is open to the Bank System's membership of nearly 3,900 savings and loan associations and similar home financing institutions, which have assets of more than $5,000,000,000."

The Editor of this Section will welcome comments from architects in any part of the country as to whether or not the F.H.L.B.S. proposition reacts to the benefit of themselves and building owners in their localities and is to be regarded as a favorable factor in public relations.

THE MURAL ABOVE TITLED "BRINGING THE NEWS TO OREGON" BY FRANK H. SCHWARZ, OF CROTON-ON-HUDSON, NEW YORK, RECALLS AN INTERESTING EPISODE OF OREGON'S HISTORY WHEN STEPHEN SENTER RODE 16 MILES THROUGH THE SPRING FLOODS TO ANNOUNCE THE LONG-AWAITED ADMISSION OF THE STATE INTO THE UNION. THIS MURAL SUGGESTS A RICH TAPESTRY, AGAINST DARK PANELLED WALNUT

MURAL IN SENATE CHAMBER, OREGON CAPITOL—FRANK H. SCHWARZ